PEB-7605 Series

Socket 478 / 479
Pentium M / Celeron M
Mini ITX Main Board

User's Manual

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How to Use This Manual

This manual is written for the system integrator, PC technician and knowledgeable PC end user. It describes how to configure your PEB-7605 to meet various operating requirements. The user's manual is divided into four chapters, with each chapter addressing a basic concept and operation of the server board.

Chapter 1: Introduction - presents what you have inside the box and gives you an overview of the product specifications and basic system architecture for the PEB-7605 server board.

Chapter 2: Hardware Configuration Setting - shows the definitions and locations of Jumpers and Connectors so that you can easily configure your system.

Chapter 3: System Installation - describes how to properly mount the CPU, main memory, and M-System Flash disk for a safe installation. It will also introduce and show you the driver installation procedure for the Graphics Controller and Ethernet Controller.

Chapter 4: BIOS Setup Information - specifies the meaning of each setup parameter, how to get advanced BIOS performance and update to a new BIOS.

Chapter 1 Introduction

The PEB-7605 SERIES all-in-one Mini ITX is designed to fit a high performance Pentium M / Celeron M processor and compatible for high-end computer system application with PCI bus architecture. It is made to meet today's demanding pace, and keep complete compatibility with hardware and software designed for the IBM PC/AT. The on-board devices support one PCI slot and integrated graphics and on-board Dual Marvell Gigabit Ethernet controller. It's beneficial to build up a high performance and high data availability system for VARs, or system integrators.

PEB-7605 SERIES support the following processors:

Intel ® Pentium ® Mobile processor Socket 478/479 supporting based on 0.90 micron (CPUID = 0xh).
Intel ® Celeron M ® processor ULV 800MHz /1Ghz (90nm) supporting based on 0.90 micron (CPUID = 0xh).

This Mini ITX can run with Intel Socket 478/479 Pentium M / Celeron M processors, and support DIMM up to 1GB DDR Memory. The enhanced on-board two PCI-IDE interface can support 4 drives up to PIO mode 4 timing and Ultra ATA33/66/100/133 synchronous mode feature , The on-board Super I/O chipset support four serial ports, one SIR (Serial Infrared) port, and one parallel port. Fourth high performance 16C550-compatible UARTs provide 16-byte send/receive FIFOs and the multi-mode parallel port supports SPP/EPP/ECP function. three RS-232 serial port interface and one RS-232 pin herder .Besides, H/W monitor function, , Intel High Definition Audio as 5.1 surround sound , Hi-Speed USB 2.0 x 6 ports offer up to 40X greater bandwidth over USB 1.1 Also provide dual display function by VGA and LVDS interface..

The Mini-ITX standard makes the PEB-7605 SERIES work with the one slot PCI . One 6-pin Mini-DIN connectors are provided to connect PS/2 mouse and keyboard. The on-board Flash ROM is used to make the BIOS update easier. The high precision Real Time Clock /calendar is built to support Y2K for accurate scheduling and storing configuration information. One 20-pin standard connector is designed to support ATX power function. A feature of CPU overheat protection will give user more security and stability. All of these features make PEB-7605 SERIES excellent in stand-alone applications.

1.1 Packing Check List

The PEB-7605 SERIES package includes the following basic items accompany with this manual.

- One Quick Installation Guide for PEB-7605 series
- User's Manual (this manual in PDF file format)
- One PEB-7605 SERIES Mini ITX
- One 34pin FDD cable
- One 40pin IDE cable
- One 26pin Parallel Port cable
- One 9pin COM 4 Port cable
- One USB 2.0 cable
- One I/O Shield
- One CD-Title to support internal VGA display driver network controller driver.

If any of these items is damaged or missed, please contact your vendor and save all packing materials for future replacement and maintenance.

1.2 Product Specification

CPU

◇ Support Intel Pentium Mobile / Celeron M processor up to 2.1GHz and above or Celeron M processor 800MHz / 1GHz on board

◇ CPU bus clock : 400 MHz

Chipset Intel® 82852GM GMCH & 82801DB ICH4 Main Memory

◇ One 184-pin DIMM socket

◇ 256 MB to 1GB using 256MB/512MB/1GB

◇ Supports up to CL2 or 2.5 or 1 DIMMs at DDR200/DDR266/333MHz memory bus.

System BIOS

◇ AWARD BIOS with PC'99 support

◇ FWH 4Mb Flash ROM for easy upgrades

◇ Support ACPI, DMI, PnP, and Green function

Super I/O Winboand W83627EHG

◇ Serial Ports : Support Four RS232 ports

◇ IrDA Interface : Support one Infrared port

◇ Parallel Port : Support one SPP, EPP/ECP bi-directional parallel port

Storage IDE Interface

◇ Support Two Ultra DMA 33/66/100/133 support four IDE devices by one 44-pin(Master) and one 40-pin IDE connector, one Compact Flash socket (reverse side)

USB

◇ Support 6 x USB 2.0 ports

Keyboard and PS/2 Mouse Interfaces

◇ Support two mini-DIN 6-pin connector for Keyboard and Mouse.

Auxiliary I/O

◇ One 2-pin system reset switch

◇ One 2-pin system power on LED

◇ One 2-pin HDD active indicator interface

◇ One 2-pin ATX power control interface

◇ Two 3-pin headers for CPU and system fan

Real-Time Clock/Calendar (RTC)

◇ Build-in ICH4

◇ Y2K compliant

System Monitoring and Protection

◇ Monitoring system temperature, voltage, and cooling fan status

◇ Auto throttling control when CPU overheats

◇ System automatically restored on recovery of AC power loss

Wake On LAN & Modem Ring on

◇ Support system wake up function from Network and Modem

On-chip VGA Display

◇ Intel® FW82855GM GMCH integrated Extreme Graphics controller

◇ One DSUB-15 connector for CRT display interface.

◇ Two LVDS connectors for 18bit dual channel LVDS panel display interface.

◇ CRT mode :Support Maximum resolution up to 2048 x 1536 for 3D at refresh rates 75Hz.

◇ Multiple Maximum overlay display resolution up to 1600 x 1200 (85Hz)

On-board Ethernet Function

◇ Support dual Ethernet function two RJ-45 interface ports, by Realtek (8100C) Ethernet controller support 10/100BASE-T

◇ Support two LED indicators to display active and link message

One PCI Interfaces

◇ Support one extended PCI slot compliant with PCI 2.2 specification.

Physical and Environmental requirements :

◇ Outline Dimension (L x W) : 170mm (6.69 inch) X 170mm (6.69 inch)
◇ Power Requirements : +5V@165mA (typical), +12V@405mA, -12V@61mA,+3.3V@2.82A
◇ Operating Temperature : 0 ~ 60 ℃
◇ Storage Temperature : -20~70℃
◇ Relative Humidity : 5% to 95%, non-condensing

1.3 System Architecture

All of details operating relations are shown in (Figure 1-1) PEB-7605 SERIES System Block Diagram.

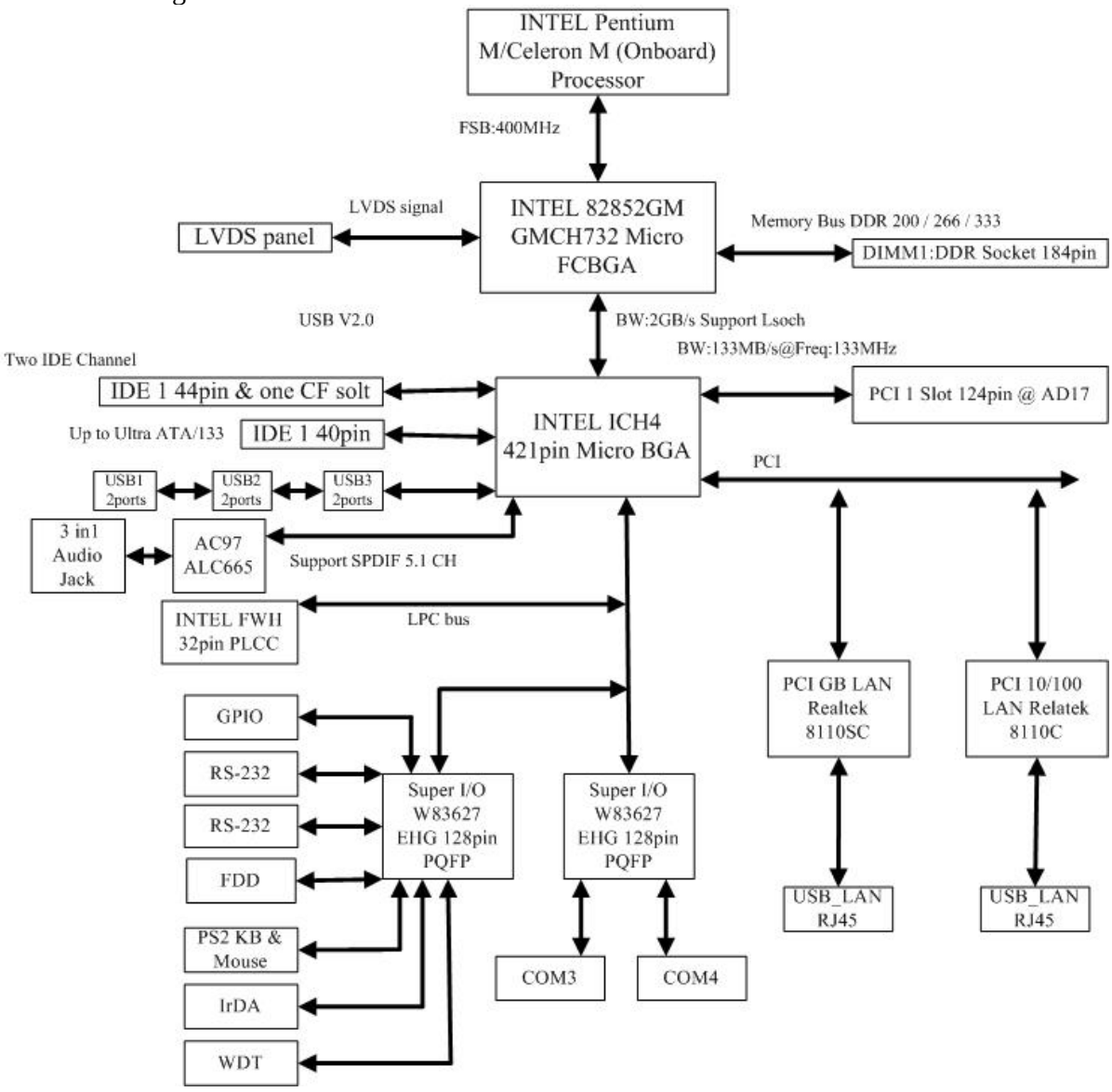


Figure 1-1 PEB-7605 SERIES System Block Diagram

Chapter 2 Hardware Configuration Setting

This chapter gives the definitions and shows the positions of jumpers, headers and connectors. All of the configuration jumpers on PEB-7605 SERIES are in the proper position. The default settings shipped from factory are marked with an asterisk (★).

2.1 Jumpers

In general, jumpers on the Mini ITX are used to select options for certain features. Some of the jumpers are designed to be user-configurable, allowing for system enhancement. The others are for testing purpose only and should not be altered. To select any option, cover the jumper cap over (SHORT) or remove (NC) it from the jumper pins according to the following instructions. Here, NC stands for "Not Connect".

2.2 Connectors

I/O peripheral devices will be connected to the interface connectors in (Figure 2-2) PEB-7605 SERIES Connector Locations.

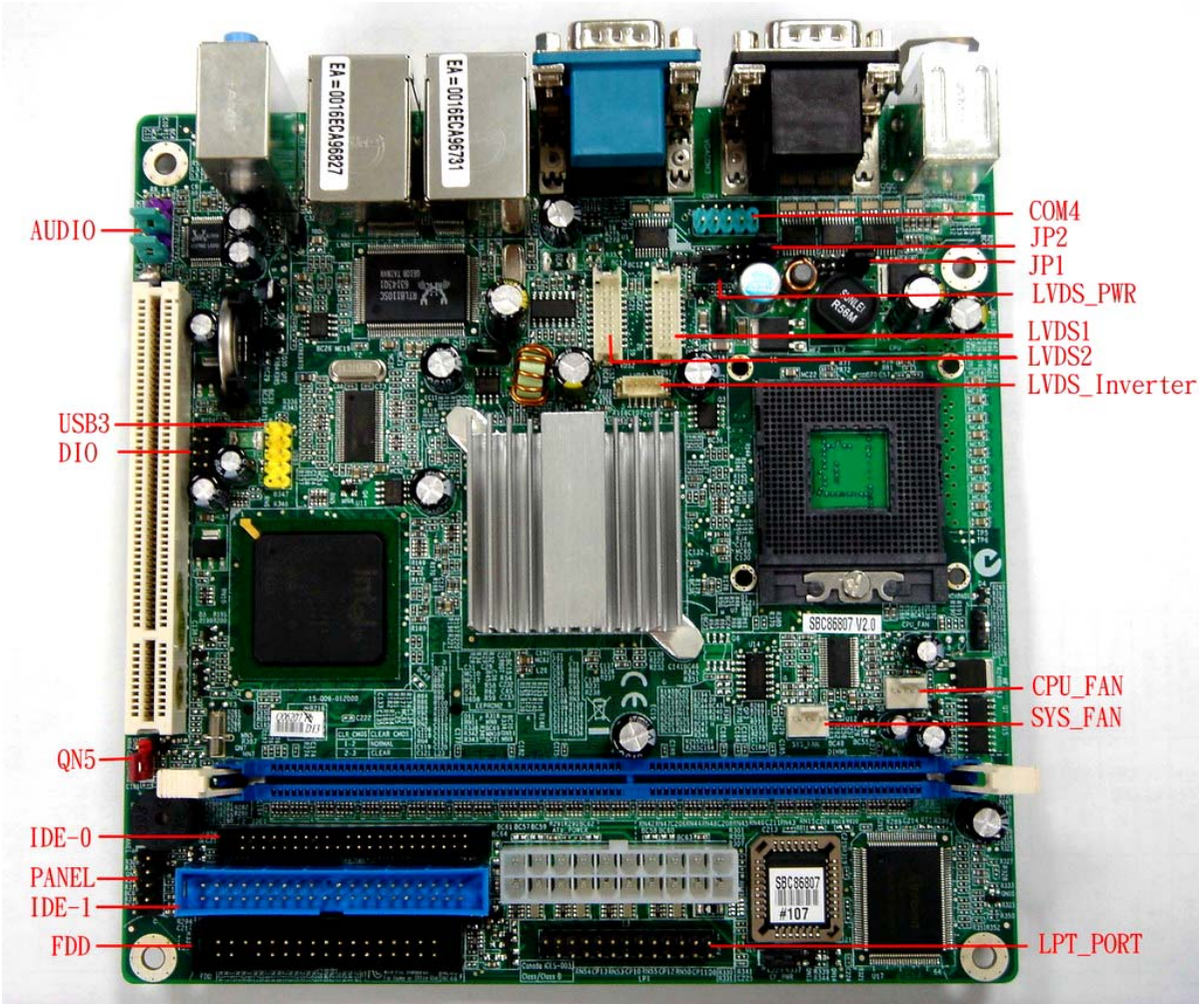
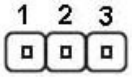


Figure 2-2 PEB-7605 SERIES Connector Locations

CONNECTOR	FUNCTION	REMARK
QN5	RTC CMOS Clear	1x3 shrouded header
PANEL1 1-3	IDE active indicator	1x2 shrouded header
PANEL1 2-4	System Power On LED	1x2 shrouded header
PANEL1 6-8	System Power on Switch	1x2 shrouded header
PANEL1 5-7	System reset	1x2 shrouded header
COM1	COM1 serial port	COM1 connector
COM2	COM2 serial port	COM2 connector
COM3	COM3 serial port	COM3 connector
COM4	COM4 serial port	2x5 shrouded header
DIO	DI/O connector	2x4 shrouded header
LPT	Parallel port connector	13x2 header, pitch 2.54mm
USB1	USB 2.0 port 1	USB1LAN1 connector
USB2	USB 2.0 port 2	USB1LAN1 connector
USB3	USB 2.0 port 3	USB2LAN2 connector
USB4	USB 2.0 port 3	USB2LAN2 connector
USB5	USB 2.0 port 3	2x5 shrouded header
USB3	USB 2.0 port 3	2x5 shrouded header
JP1	Setting COM1 / COM2 ring function	2x5 shrouded header
JP2	Setting COM3 / COM4 ring function	2x5 shrouded header
AUDIO1	AUDIO interface	2x5 shrouded header
ATX_PWR	20-PIN ATX Power connector	2x10 power connector
VGA	DUB-15 port	VGA connector
LVDS	Dual Channel 24 bit LVDS	Hirose DF13-20DP
LCD Inverter	LVDS Inverter power voltage	Hirose DF13-9DP
LVDS_PWR	Setting LVDS power voltage	1x3 shrouded header
IDE0	IDE0 (Primary) interface	22x2 header, pitch2.0mm
IDE1	IDE1 (Secondary) interface	20x2 header, pitch 2.54mm
KBMS1	PS/2 keyboard & mouse connector	Double deck connector
CPU_FAN	CPU FAN connector	3x1wafer , pitch 2.54mm
SYS_FAN	System Fan connector	3x1wafer , pitch 2.54mm

2.2.1 RTC CMOS Clear Jumper Setting (QN5)

Normal: 1-2 Short**(Default)**
Clear CMOS : 2-3 Short

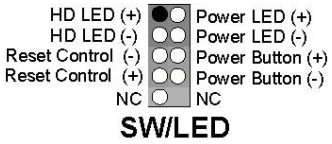


2.2.2 System Reset (PANEL1 5-7)

PIN No.	Signal Description
7	Reset
9	Ground

2.2.3 IDE1active indicator (Panel1 pin #1-3)

PIN No.	Signal Description
1	+5V (Pull-up for HDD LED)
3	HDD active# (LED cathode terminal)

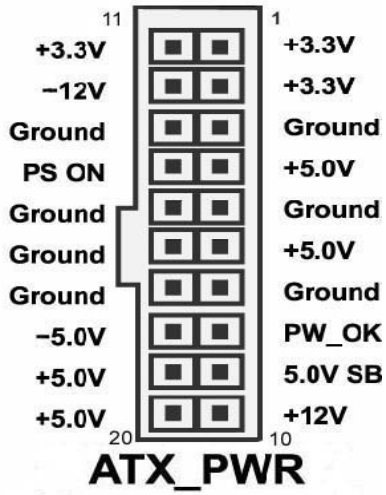


2.2.4 ATX Power Button (PANEL1 6-8)

PIN No.	Signal Description
6	Power button control signal
8	Ground

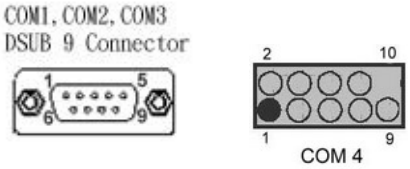
2.2.5 ATX_20P Power Connector (PWR1)

PIN No.	Signal Description
1	+3.3V
2	+3.3V
3	Ground
4	+5V
5	Ground
6	+5V
7	Ground
8	PW_OK
9	+5V SB
10	+12V
11	+3.3V
12	-12V
13	Ground
14	PS ON
15	Ground
16	Ground
17	Ground
18	-5V
19	+5V
20	+5V



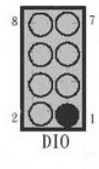
2.2.6 COM1/COM2/COM3/COM4 Interface

PIN No.	Signal Description
1	Data Carrier Detect
2	Received Data
3	Transmit Data
4	Data Terminal Ready
5	Ground
6	Data Set Ready
7	Request To Send
8	Clear To Send
9	Ring Indicator
10	Not used



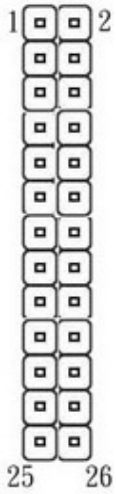
2.2.7 DIO Interface

PIN No.	Signal Description
1	GPIO 32
2	GPIO 36
3	GPIO 33
4	GPIO 37
5	GPIO 34
6	GPIO 38
7	GND
8	GND



2.2.8 Parallel Port pin header Interface

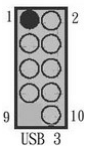
Pin	Signal Description	Pin	Signal Description
1	STB#	2	D0
3	D1	4	D2
5	D3	6	D4
7	D5	8	D6
9	D7	10	SCK#
11	BUSY	12	PE
13	SLCT	14	AFD#
15	ERR#	16	INIT#
17	SLIN#	18	GND
19	GND	20	GND
21	GND	22	GND
23	GND	24	GND
25	GDN	26	NC



2.2.9 External USB3 (USB2.0)

This motherboard provides one USB headers on the board allowing for 2 additional USB ports. To make use of this header, you must attach a USB bracket/cable with USB ports (some models will come packaged with a USB 2-port bracket-cable). The optionally packaged bracket will have two connectors that you can connect to the headers (USB1, USB2). The other end (bracket containing the USB ports) is attached to the computer casing.

Pin	Signal Description	Pin	Signal Description
1	5VSB	2	5VSB
3	Data_A-	4	Data_B-
5	Data_A+	6	Data_B+
7	GND	8	GND
9	NC	10	GND



Note:
If you are using a USB 2.0 device with Windows 2000/XP, you will need to install the USB 2.0 driver from the Microsoft® website. If you are using Service pack 1 (or later) for Windows® XP, and using Service pack4 (or later) for Windows® 2000,you will not have to install the drive r.

2.2.10 USB & LAN Connectors: USB/ b LAN 1&2

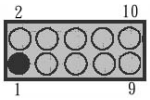
This motherboard comes with 4 USB ports and two LAN ports. The USB connectors are used to attach to keyboards, mice and other USB devices. You can plug the USB devices directly into this connector. The LAN connectors can be attached directly to a network.

Pin	Assignment	Pin	Assignment
1	TX+	5	NC
2	TX-	6	RX-
3	RX+	7	NC
4	NC	8	NC

Pin	Assignment	Pin	Assignment
1/5	+5 V (fused)	3/7	USBP0+/P1+
2/6	USBP0-/P1-	4/8	Ground

2.2.11 JP1/JP2: for COM1~COM4 Ring Function Selectors

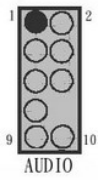
PIN No.	Signal Description
1	VCC5
2	VCC5
3	XNR11
4	XNR12
5	VCC12
6	VCC12
7	XNR11
8	XNR12
9	NR11
10	NR12



Default is 7-9 & 8-10 short

2.2.12 Audio function for external

PIN No.	Signal Description
1	F_MIC1
2	GND
3	F_MIC2
4	VCC5
5	LOUTR
6	F_R
7	NC
8	NC
9	LOUTL
10	F_L

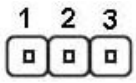


2.2.12.1 Audio Jack

PIN No.	Signal Description
1(Orange)	Speak-Out
2(Black)	MIC-in

2.2.13 CF_PWR

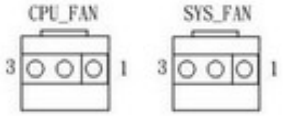
PIN No.	Signal Description
1	VCC3
2	VCC_CF
3	VCC5



Default is 1-2 short be 3.3V

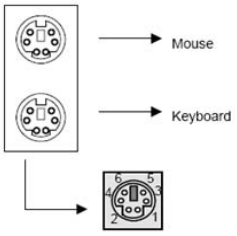
2.2.14 CPU_FAN / SYS_FAN

PIN No.	Signal Description
1	Ground
2	+12V
3	RPM signal



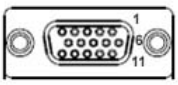
2.2.15 PS/2 Keyboard & Mouse(KBMS1)

PIN No.	Signal Description
1	Keyboard Data
2	Mouse Data
3	Ground
4	+5V
5	Keyboard Clock
6	Mouse Clock



2.2.16 VGA D-SUB15 Connector

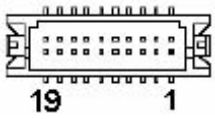
PIN No.	Signal Description
1	Red Signal
2	Green Signal
3	Blue Signal
4	NC
5	GND
6	GND
7	GND
8	GND
9	VCC
10	GND
11	NC
12	DCC_DATA
13	HSYNC
14	VSYNC
15	DCC_CLK



On Board VGA D-SUB15 Connector

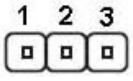
2.2.17 LVDS 1(Channel A) / LVDS 2(Channel B) panel Connector

PIN No.	Signal Description	PIN No.	Signal Description
1	VCC	2	VCC
3	VCC	4	VCC
5	YAM0 / YBM0	6	YAM3 / YBM3
7	YAP0 / YAP0	8	YAP3 / YBP3
9	GND	10	GND
11	YAM1 / YBM1	12	CLKAM / CLKBM
13	YAP1 / YBP1	14	CLKAP / CLKBP
15	GND	16	GND
17	YAM2 / YBM2	18	GND
19	YAP2 / YBP2	20	GND



2.2.18 LVDS_PWR LVDS panel power voltage jumper

PIN No.	Signal Description
1	VCC3
2	VCC_CF
3	VCC5



Default is 1-2 short be 3.3V

2.2.19 LCD Inverter Power voltage Connector

PIN No.	Signal Description
1	VCC12M1
2	VCC5V
3	VCC12M1
4	LVDS_BKLTEN
5	GEN

LCD inverter power voltage

2.2.20 Compact Flash Connector

PIN No.	Signal Description	PIN No.	Signal Description
1	GND	2	HD03
3	HD04	4	HD05
5	HD06	6	HD07
7	CS0#	8	GND
9	GND	10	GND
11	GND	12	GND
13	VCC	14	GND
15	GND	16	GND
17	GND	18	A02
19	A01	20	A00
21	HD00	22	HD01
23	HD02	24	IOCS16#
25	CD2#	26	NC
27	HD11	28	HD12
29	HD13	30	HD14
31	HD15	32	CS1#
33	NC	34	HIOR#
35	HIOW#	36	WE#
37	INTRQ	38	VCC
39	CSEL#	40	NC
41	RESET#	42	IORDY
43	DMAREQ	44	DMAACK#
45	DASP#	46	PDIAG#
47	HD08	48	HD09
49	HD10	50	GND

Chapter 3 System Installation

This chapter provides you with instructions on how to setup your system. The additional information shows you how to install CPU/ FAN and memory .

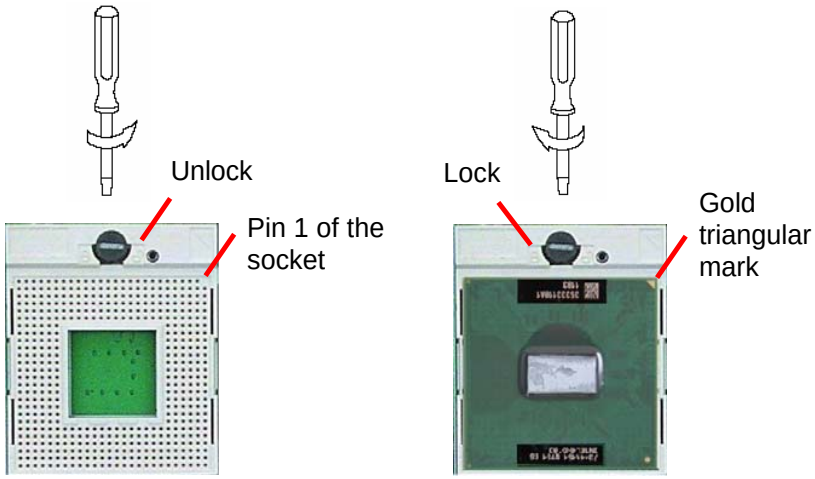
3.1 Socket 478 / 479 Processor

3.1.1 Installing Pentium M / Celeron M Processor

I. The processor socket comes with a screw to secure the processor, please unlock the screw first.

II. Position the CPU above the socket and the gold triangular mark on the CPU must align with pin 1 of the CPU socket. Then Insert the CPU gently seated in place.

III. Turn the screw to the lock position.

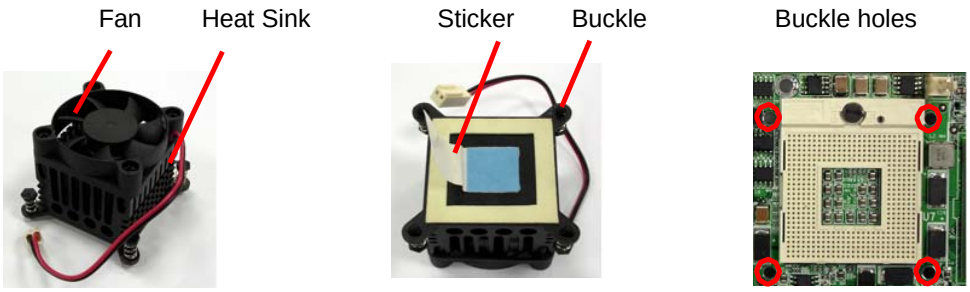


Note: (1)Do not force the CPU into the socket. It may bend the pins and damage the CPU
(2)The PEB-7605 (On-Board CPU) no need to installed .

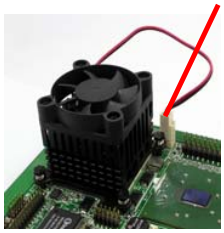
3.1.2 Installing Processor FAN Cooler and Heat Sink

i. Tear the sticker off on the bottom of the CPU cooler which combined with the fan and heat sink.

ii. Place the CPU cooler right upon the buckle holes.



CPU fan connector



CPU Installed

(Rear side)

Note: (1) Make sure the CPU fan and heat sink assembly and the CPU top surface are in total contact to avoid CPU overheating problem that would cause the system to hang or unstable.
(2) The PEB-7605 (On-Board PCU) no need it , which it already have CPU heat sink for fan less.

3.1.3 Main Memory

PEB-7605 SERIES provides 1 DIMMs (184-pin Dual In-line Memory Module) to support 2.6V DDRAM (Synchronized DRAM) as on-board main memory. The

maximum memory size is 256B~ 1GB with using 256MB/512MB/1GB technology. Supports up to 1 double sided DIMMs at 266/333 MHz. The memory architecture adopts 128-bit data interface to support for x8 and x16 DDRAM(DDR1) device width. In addition, it only support Non-ECC memory .

For system compatibility and stability, don't use memory module without brand. You can also use the single or double-side DIMM .The three DIMMs can be out of order. You can install different size of DDRAM module on DIMM1, or all to boot up system.

Without out the contact and lock integrity of memory module with socket, it will impact on the system reliability. Follow normal procedure to install your DDRAM module into memory socket. Before locking, make sure that the module has been fully inserted into the DIMM slot.

NOTE: For maintaining system stability, do not change any of DDR memory parameters in BIOS setup to upgrade your system performance without acquiring technical information.

3.2 Installing the Mini ITX

To install your PEB-7605 SERIES into standard chassis or proprietary environment, you need to perform the following steps:

(1). Check all jumpers setting on proper position
(2). Install and configure CPU and memory module on right position
(3). Place PEB-7605 SERIES into the dedicated position in your system
(4). Attach cables to existing peripheral devices and secure it

NOTE: Please refer section 3.4 to install display and Ethernet drivers and setup your system.

WARNING: Please ensure that your SBC properly inserted and fixed by mechanism. Otherwise, the system might be unstable or do not work from bad contact of golden finger.

3.2.1 852GM Integrated Graphics Controller

Intel® FW82855GM GMCH integrated Extreme Graphics controller, one DSUB-15 connector for CRT display interface. Two LVDS connectors for 18bit dual channel LVDS panel display interface. CRT mode :Support Maximum resolution up to 2048 x 1536 for 3D at refresh rates 75Hz. Multiple Maximum overlay display resolution up to 1600 x 1200 (85Hz)

The 852GM supports the modes which appear in the table below.

Resolution	Bits Per Pixel (Frequency in Hz)		
	256 Color	16-bit	32-bit
640 * 480	60,70,72,75,85,100,120	60,70,72,75,85,100,120	60,70,72,75,85,100,120
800 * 600	60,70,72,75,85,100,120	60,70,72,75,85,100,120	60,70,72,75,85,100,120
1024 * 768	60,70,75,85,100,120	60,70,75,85,100,120	60,70,75,85,100,120
1280 * 960	60,75,85	60,75,85	60,75,85
1152 * 864	60,75,85,100	60,75,85,100	60,75,85,100
1280 * 1024	60,75,85,100,120	60,75,85,100	60,75,85,100,120
1600 * 1200	60,75,85,100,120	60,75,85,100,120	60,75,85,100,120
1920 *1440	60,75,85	60,75,85	60,75,85
2048 *1536	60,75	60,75	60
1440 *1050	60,75,85	60,75,85	60,75,85
1856 * 1392	60,75	60,75	60,75
1920 * 1080	60,75,85,100	60,75,85,100	60,75,85,100
1920 *1200	60,75	60,75	60,75
1280 * 600	60	60	60
1208 * 720	60,75,85,100	60,75,85,100	60,75,85,100
1600 * 900	60,75,85,100,120	60,75,85,100,120	60,75,85,100,120
1280 * 768	60	60	60
1050 *1400	60,75,85	60,75,85	60,75,85
768 * 1024	60,70,72,75,85,100,120	60,70,72,75,85,100,120	60,70,72,75,85,100,120
864 * 1152	60,75,85,100	60,75,85,100	60,75,85,100
1024 *1280	60,75,85,100,120	60,75,85,100,120	60,75,85,100,120
1200 * 1600	60,75,85,100,120	60,75,85,100,120	60,75,85,100,120
1440 * 1920	60,75,85	60,75,85	60,75,85
1536 * 2048	60,75	60,75	60
960 * 1280	60,75,85	60,75,85	60,75,85
1080 * 1920	60,75,85,100	60,75,85,100	60,75,85,100
720 * 1280	60,75,85,100	60,75,85,100	60,75,85,100
900 * 1600	60,75,85,100,120	60,75,85,100,120	60,75,85,100,120
768 * 1280	60	60	60
1392 * 1856	60,75	60,75	60,75

3.2.2 Dual Realtek 81xx 10/100 Base-TX Ethernet controller

Dual Realtek 81xx 10/100 BASE-TX Ethernet controller by PCI .

The PEB-7605 SERIES provides two LED indicators on RJ-45 connector to show LAN interface status.

These messages will give you a guide for troubleshooting.

Yellow LED indicates transmit and receive activity.

Blinking : indicates transmit/receive activity

On : indicates no activity but link is valid
Off : link is invalid

Green LED indicates Link speed

On : link speed at 100Mbps
Off : link speed at 10Mbps

3.2.3 Drivers Support

PEB-7605 SERIES provides on CD-Title to support on-board VGA and Ethernet device drivers in various operating systems. Before installing the device drivers, please see the reference files in each sub-directory. You cannot install drivers from CD-Title directly.

CD-Title List:

852GM CHIPSET INTEGRATED GRAPHY: support Win2000, XP , Win2003 and … environment

INTEL 852GM & ICH4(R) CHIPSET DRIVER: support Win2000 , XP , Win2003 and … environment

Dual Realtek 81xx Ethernet controller driver support :Win2000 , XP , Win2003 , and….. environment

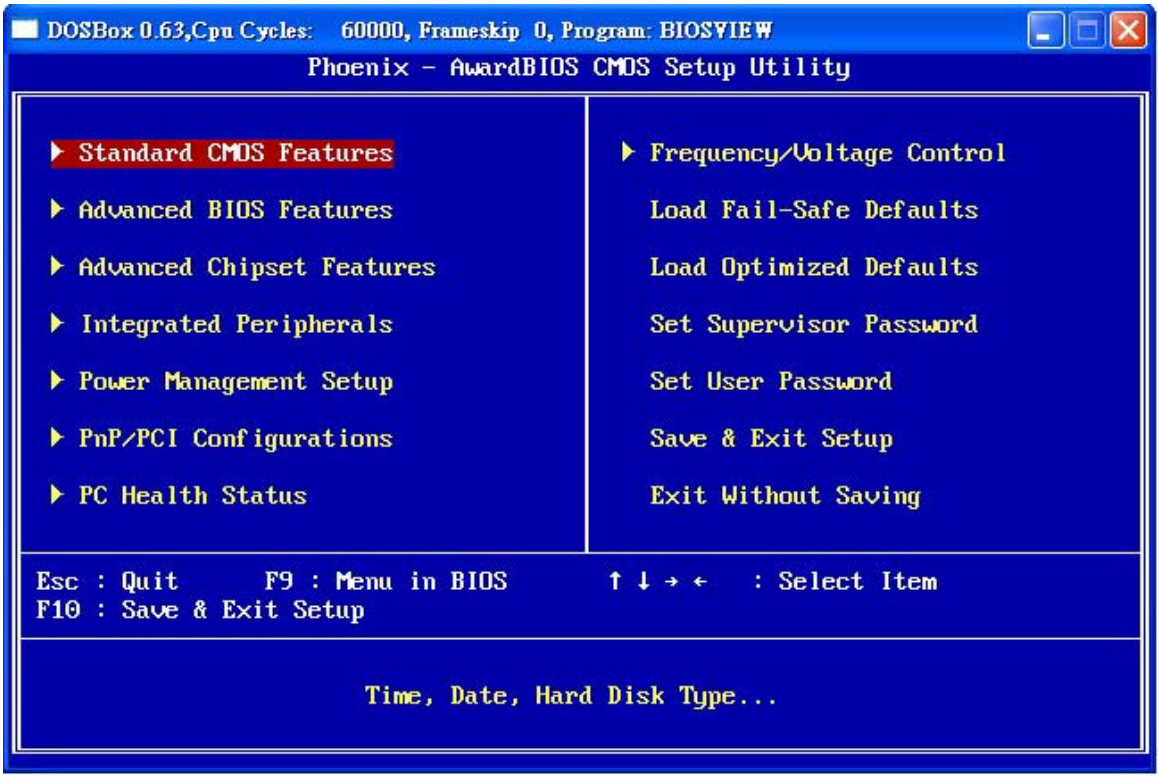
Audio AC97 Realtek ALC 655 codec controller driver support: Win2000 , XP , Win2003 , and….. environment

Chapter 4 BIOS Settings

4.1 Entering Setup

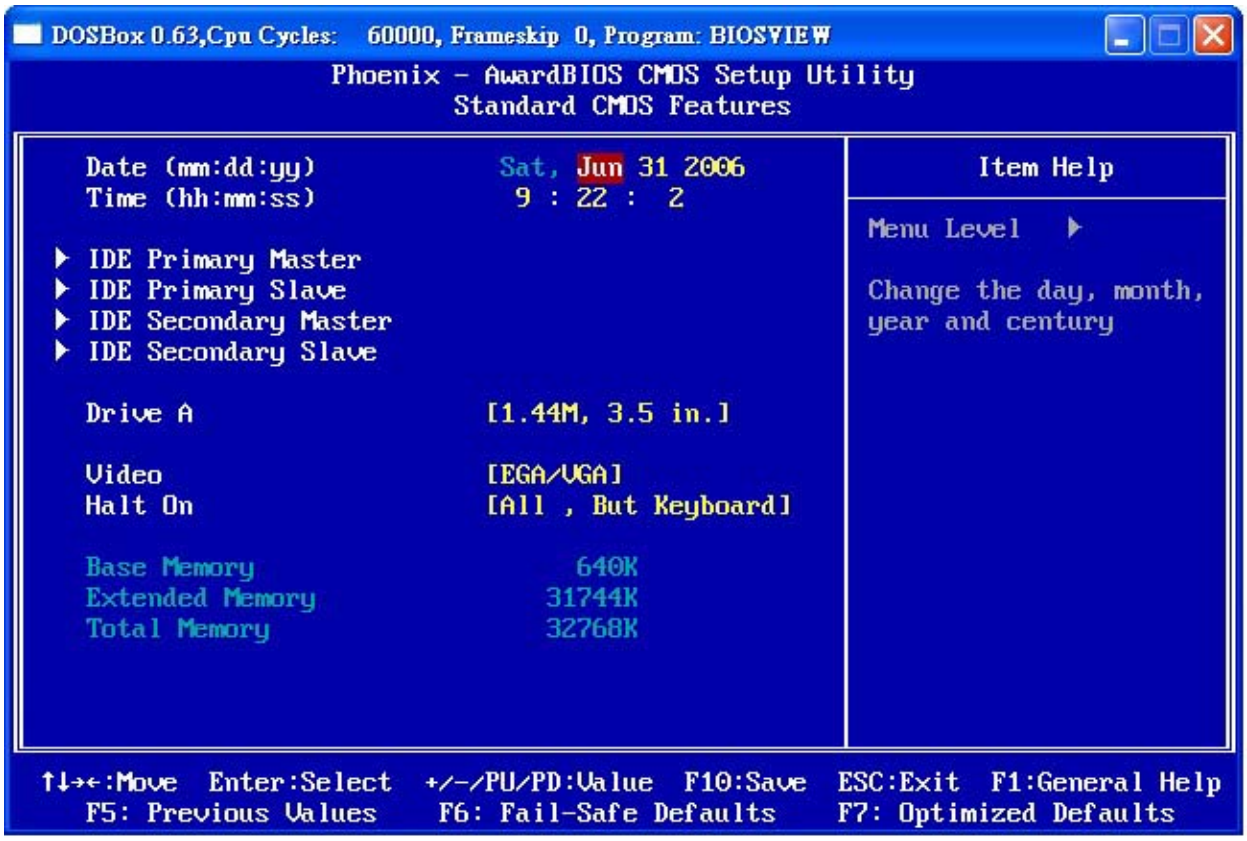
Phoenix-Award BIOS has a built-in setup program that allows users to modify the basic system configuration. This information is stored in CMOS RAM whose power is supplied by a battery so that it can retain the setup information even when the power is turned off. Press Delete when you Power on or Reboot the computer system. (i.e. After the logo appears at the center of the screen, please press Delete to enter the BIOS setup program). In the BIOS, make sure that everything is working fine before you try to optimize it for maximum performance.

4.2 Main Menu


DOSBox 0.63,Cpu Cycles: 60000, Frameskip 0, Program: BIOSVIEW
Phoenix - AwardBIOS CMOS Setup Utility
Standard CMOS Features
Advanced BIOS Features
Advanced Chipset Features
Integrated Peripherals
Power Management Setup
PnP/PCI Configurations
PC Health Status
Frequency/Voltage Control
Load Fail-Safe Defaults
Load Optimized Defaults
Set Supervisor Password
Set User Password
Save & Exit Setup
Exit Without Saving
Esc : Quit F9 : Menu in BIOS ↑ ↓ → ← : Select Item
F10 : Save & Exit Setup
Time, Date, Hard Disk Type...

When you enter the PHOENIX-AWARD™ CMOS Setup Utility, the **Main** will appear on the screen. The Main allows you to select several configuration options. Use the left/right arrow keys to highlight a particular configuration screen from the top menu bar or use the down arrow key to access and configure the information below.

4.3 Standard CMOS Features


DOSBox 0.63,Cpu Cycles: 60000, Frameskip 0, Program: BIOSVIEW
Phoenix - AwardBIOS CMOS Setup Utility
Standard CMOS Features
Date (mm:dd:yy) Sat, Jun 31 2006
Time (hh:mm:ss) 9 : 22 : 2
IDE Primary Master
IDE Primary Slave
IDE Secondary Master
IDE Secondary Slave
Drive A [1.44M, 3.5 in.]
Video [EGA/VGA]
Halt On [All , But Keyboard]
Base Memory 640K
Extended Memory 31744K
Total Memory 32768K
Item Help
Menu Level
Change the day, month, year and century
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Date (mm/date/year) and Time (hh/mm/ss)

Allow you to change the date and time of the system clock. No matter how good the quality of the motherboard, remember that losing (or gaining) several seconds per month is not a surprising thing.

IDE Channel 0 Master/Slave

You can press **Enter** to see the submenus they contain.

IDE Channel 1 Master/Slave

You can press **Enter** to see the submenus they contain.

Drive A

You can press **Enter** to see the submenus they contain. Available options are 360K/5.25 in ,1.2M/5.25 in ,720K/3.5 in, 1.44M/3.5 in , 2.88M/ 3.5 in

Video

Allows you to select the type of displaying standard you are using. Available options are **EGA/VGA, CGA 40, CGA 80** and **MONO**.

Halt On

Select the situation in which you want the BIOS to stop the POST process and notify you. Available options are **All Errors, No Errors, All, but keyboard, All, but diskette,** and **All, but disk/key**.

Base Memory

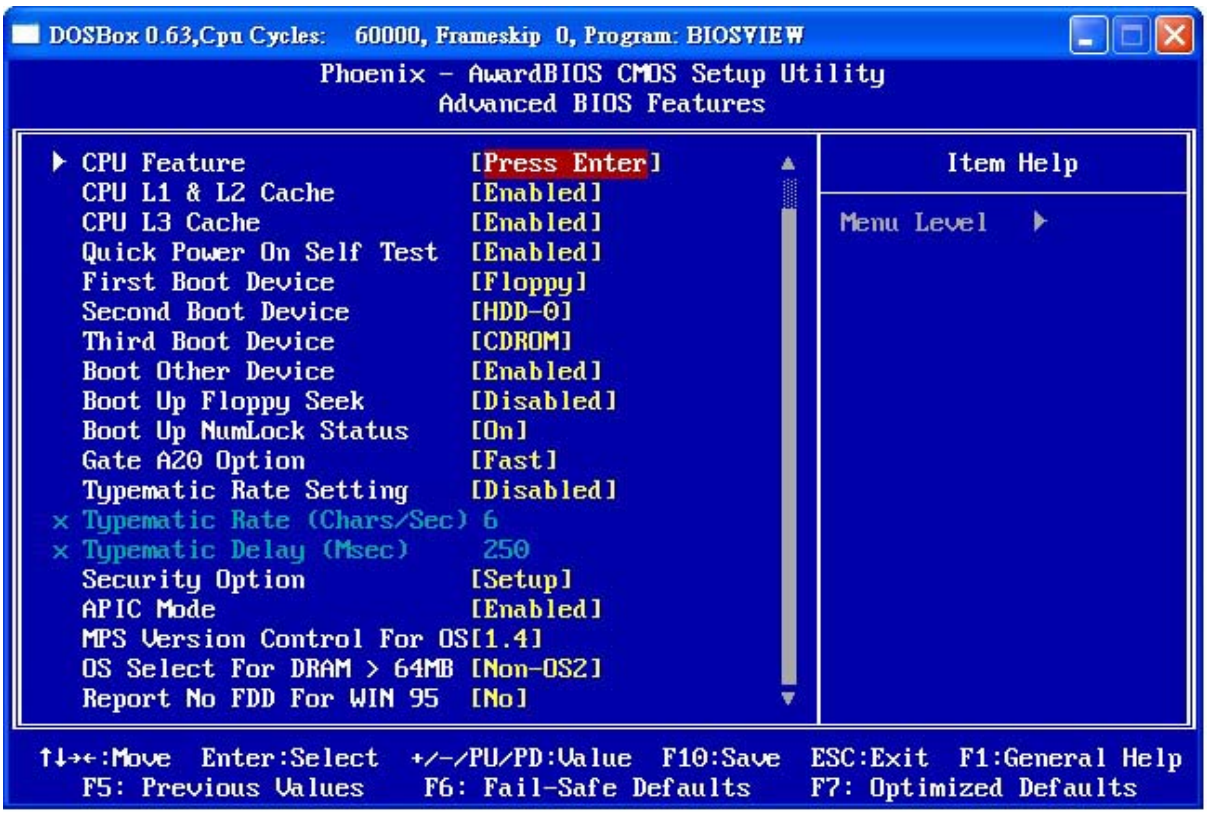
Displays the amount of conventional memory detected during boot up.

Extended Memory

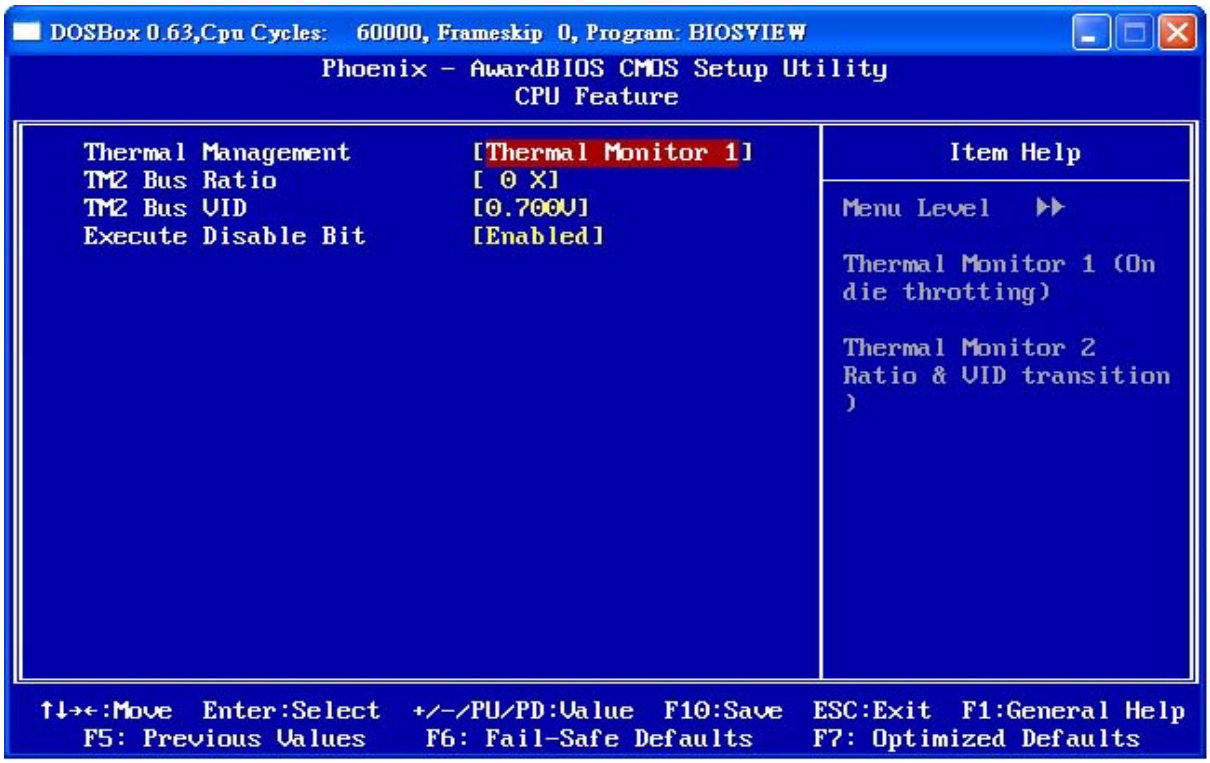
Displays the amount of extended memory detected during boot up.

Total Memory
Displays the total memory available in the system.

4.4 Advanced BIOS Features


DOSBox 0.63,Cpu Cycles: 60000, Frameskip 0, Program: BIOSVIEW
Phoenix - AwardBIOS CMOS Setup Utility
Advanced BIOS Features
CPU Feature [Press Enter]
CPU L1 & L2 Cache [Enabled]
CPU L3 Cache [Enabled]
Quick Power On Self Test [Enabled]
First Boot Device [Floppy]
Second Boot Device [HDD-0]
Third Boot Device [CDROM]
Boot Other Device [Enabled]
Boot Up Floppy Seek [Disabled]
Boot Up NumLock Status [On]
Gate A20 Option [Fast]
Typematic Rate Setting [Disabled]
x Typematic Rate (Chars/Sec) 6
x Typematic Delay (Msec) 250
Security Option [Setup]
APIC Mode [Enabled]
MPS Version Control For OS[1.4]
OS Select For DRAM > 64MB [Non-OS2]
Report No FDD For WIN 95 [No]
Item Help
Menu Level
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

4.4.1 CPU Feature


DOSBox 0.63,Cpu Cycles: 60000, Frameskip 0, Program: BIOSVIEW
Phoenix - AwardBIOS CMOS Setup Utility
CPU Feature
Thermal Management [Thermal Monitor 1]
TM2 Bus Ratio [0 X]
TM2 Bus VID [0.700V]
Execute Disable Bit [Enabled]
Item Help
Menu Level
Thermal Monitor 1 (On die throtting)
Thermal Monitor 2 Ratio & VID transition)
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Thermal Management

This BIOS feature controls the activation of the Thermal Monitor' s automatic mode. It allows you to determine when the Pentium 4' s Thermal Monitor should be activated in automatic mode after the system boots. In general, the Thermal Monitor should not be activated immediately on booting since the processor will be under a heavy load during the booting process, which results in the sharp rise in die temperature from its cold state, which leads to the unstable system. Therefore, to ensure optimal booting performance, the activation of the Thermal Monitor must be delayed for a set period of time. But how do you possibly know the optimal delay time? It is recommended that you set this to its lowest value that exceeds the time it takes to fully boot up your computer.
This item will monitor the CPU thermal to prevent the CPU damage from high temperature.

TM2 BUS Ratio

Select the Represents the frequency (bus ratio of the throttled performance statethat will be initiated when the on-die sensor goes from not hot to hot

TM2 BUS VID

Select Represents the voltage of the throttled performance statethat will be initiated when the on die sensor gose from not hot to hot .

Execute Disable Bit

Select when disable , forces the XD feature flag to always return 0.

CPU L1 & L2 & L3 Cache

Cache memory is much faster than conventional DRAM system memory. These fields allow you to **enable** or **disable** the CPUs Level 1 built-in cache and Level 2 external cache. Both settings are left as Enabled to significantly enhance the performance of your computer.

Quick Power On Self Test

Enable this function to reduce the amount of time required to run the POST (Power On Self Test). BIOS will save time by skipping certain tests during POST. It is recommended that you **disable** this setting. Finding a problem during boot up is better than loosing data during your work.

First/Second/Third/Other Boot Device

Allow you to select the First, Second and Third Boot Device. If your computer is newly constructed, the next thing you want to do is load the Operating System from scratch, directly off its CD. Before that, you need to set the First Boot Device to the CDROM. This instructs the BIOS to boot from the CD drive before trying to boot from the hard drive, which is still blank.

Boot Up Floppy Seek

This function defines the seek disk drivers during boot up .Disabling seed boot up.

Boot Up NumLock Status

This function defines the keyboard's numberpad as number keys or arrow keys. If it is set at **On** the number keys will be activated, if it is set at **Off** the arrow keys will be activated.

Gate A20 Option

Select if chipset or keyboard control should control Gate A20.

Typematic Rate Setting

When **enabled**, you can set the following two-typematic control items. When **disabled**, the keyboard controller determines keystrokes arbitrarily in your system.

Typematic Rate (Chars/Sec)

The typematic rate sets the rate at which characters on the screen repeat when a key is pressed and held down.

Typematic Delay (Msec)

The typematic delay sets how long after you press a key that a character begins repeating.

APIC Mode

By enabling this option, "**MPS version control for OS**" can be configured. **Disabled** is recommended.

MPS Version Control for OS

The 1.1 version is the older version that supports 8 more IRQs in the Windows NT environment. Choose the new 1.4 version for Windows 2000 and Windows XP. Options: 1.4 (default)、1.1

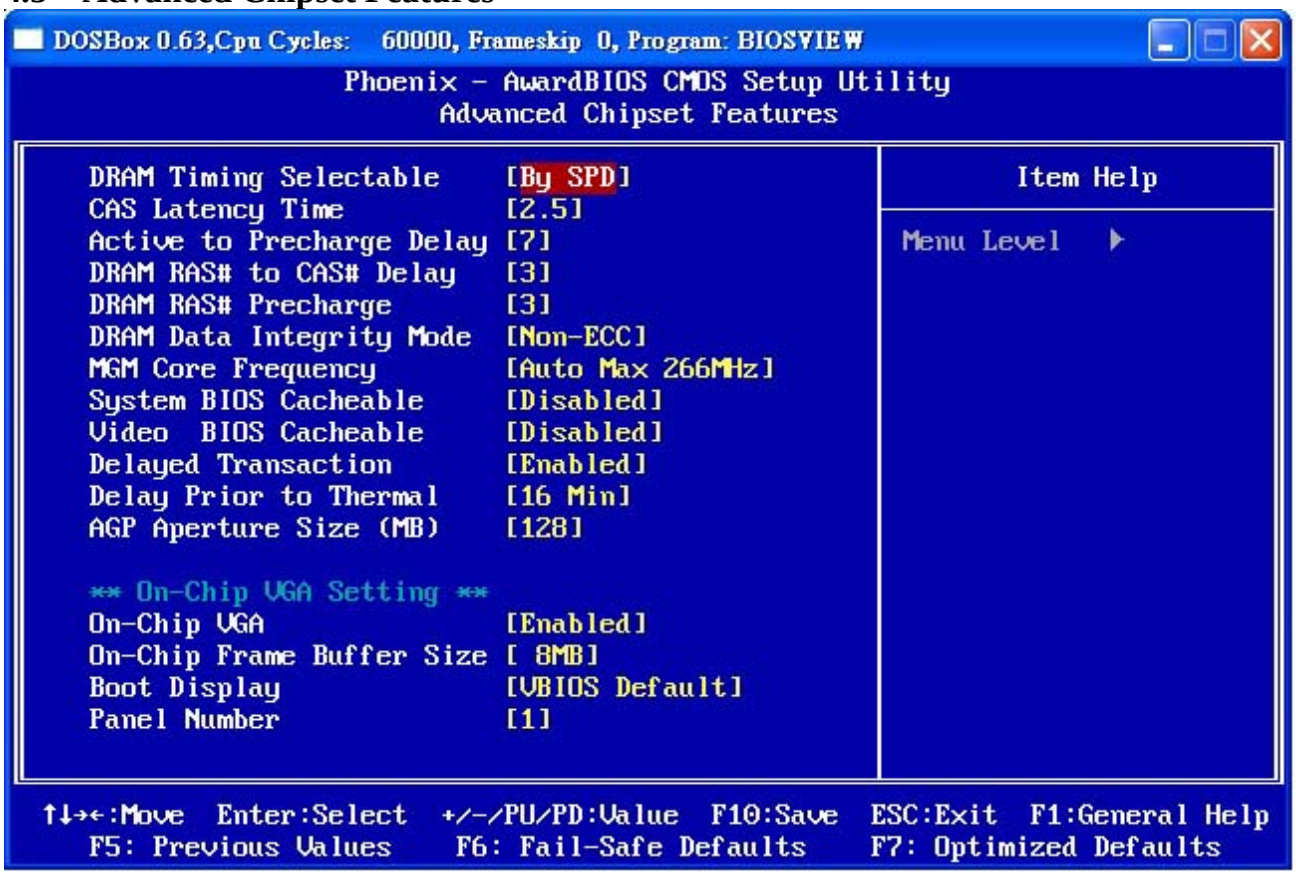
OS Select For DRAM > 64MB

IBM's relic. If your system's DRAM is larger than 64MB and you are running OS/2, select OS/2 as the item value. Otherwise, set the item value to Non-OS/2 for all other operating systems.

Report No FDD For Win95

The original Windows 95 requires the presence of a floppy. Unless the BIOS tells it to disregard the absence of the drive , it will generate an error message. For other operating systems as Win98 etc this field is without relevance.

4.5 Advanced Chipset Features


DOSBox 0.63,Cpu Cycles: 60000, Frameskip 0, Program: BIOSVIEW
Phoenix - AwardBIOS CMOS Setup Utility
Advanced Chipset Features
DRAM Timing Selectable [By SPD]
CAS Latency Time [2.5]
Active to Precharge Delay [7]
DRAM RAS# to CAS# Delay [3]
DRAM RAS# Precharge [3]
DRAM Data Integrity Mode [Non-ECC]
MGM Core Frequency [Auto Max 266MHz]
System BIOS Cacheable [Disabled]
Video BIOS Cacheable [Disabled]
Delayed Transaction [Enabled]
Delay Prior to Thermal [16 Min]
AGP Aperture Size (MB) [128]
** On-Chip VGA Setting **
On-Chip VGA [Enabled]
On-Chip Frame Buffer Size [8MB]
Boot Display [VBIOS Default]
Panel Number [1]
Item Help
Menu Level
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

DRAM Timing Selectable

This item determines DRAM clock/timing using SPD or manual configuration. Make sure your memory module has SPD (Serial Presence Data), if you want to select the "**By SPD**" option. Options: Manual、By SPD (default)

CAS Latency Time

CAS is short for column address strobe, which is a kind of signals. When the CPU needs data from SDRAM, CAS signals will be sent via the CAS line to specify the column where the data is needed. This controls the time delay (in clock cycles - CLKs) that passes before the SDRAM starts to carry out a read command after receiving it. This also determines the number of CLKs for the completion of the first part of a burst transfer. In other words, the lower the latency, the faster the transaction.

Note that some SDRAM modules may not be able to handle the lower latency and will become unstable and lose data. Therefore, set the DRAM CAS Latency Time to **2** for optimal performance if possible but increase it to **2.5** if your system becomes unstable.

Interestingly, increasing the CAS latency time does have an advantage in that it will enable the SDRAM to run at a higher clockspeed, thereby giving you an edge in overclocking your system. So, if you hit a snag while overclocking, try increasing the

CAS latency time.

DRAM RAS# to CAS# Delay

This item allows you to select a delay time between the CAS and RAS strobe signals. It only applies when DRAM is written to, read from, or refreshed. This field is adjustable only when "DRAM Timing Selectable" is set to "manual". This field is locked when "DRAM Timing Selectable" is set to "By SPD" and is automatically determined by the system. Options: 4、3、2

DRAM RAS# Precharge

This item allows you to select the DRAM RAS# precharge time. The ROW address strobe must precharge again before DRAM is refreshed. An inadequate configuration may result in incomplete data. This field is adjustable only when "DRAM Timing Selectable" is set to "**manual**". This field is locked when "DRAM Timing Selectable" is set to "**By SPD**" and is automatically determined by the system. Options: 4、3、2

MGM Core Frequency

This field sets the frequency of the DRAM memory installed.
The choices : Auto Max 266MHz, 400/266/133/200 MHz , 400/200/100/200 MHz, 400/200/100/133 MHz , 400/266/133/267 MHz,

System BIOS Cacheable

Enabling this function allows caching of the system BIOS ROM at F0000h-FFFFFh, which results in better system performance. However, if any program writes to this memory area, a system error may result. It is advisable to leave it in default setting. Caching the system BIOS results in better performance than shadowing the system BIOS.

Video BIOS Cacheable

This feature is only valid when the BIOS is shadowed. It enables or disables the caching of the video BIOS ROM at C0000h~C7FFFh via the L2 cache. This greatly speeds performance because the OS bypasses the BIOS using the graphics driver to access the video card's hardware directly.

On-Chip VGA

This item is enabled as the onboard VGA is used. The Choices: Enable / Disable

On-Chip Frame Buffer Size

This item is to select the amount of system memory that will be utilized as internal graphics device memory

The choices: 1MB, 4MB, 8MB, 16MB, 32MB.

Boot Display

This item is to select the display device that the screen will be shown

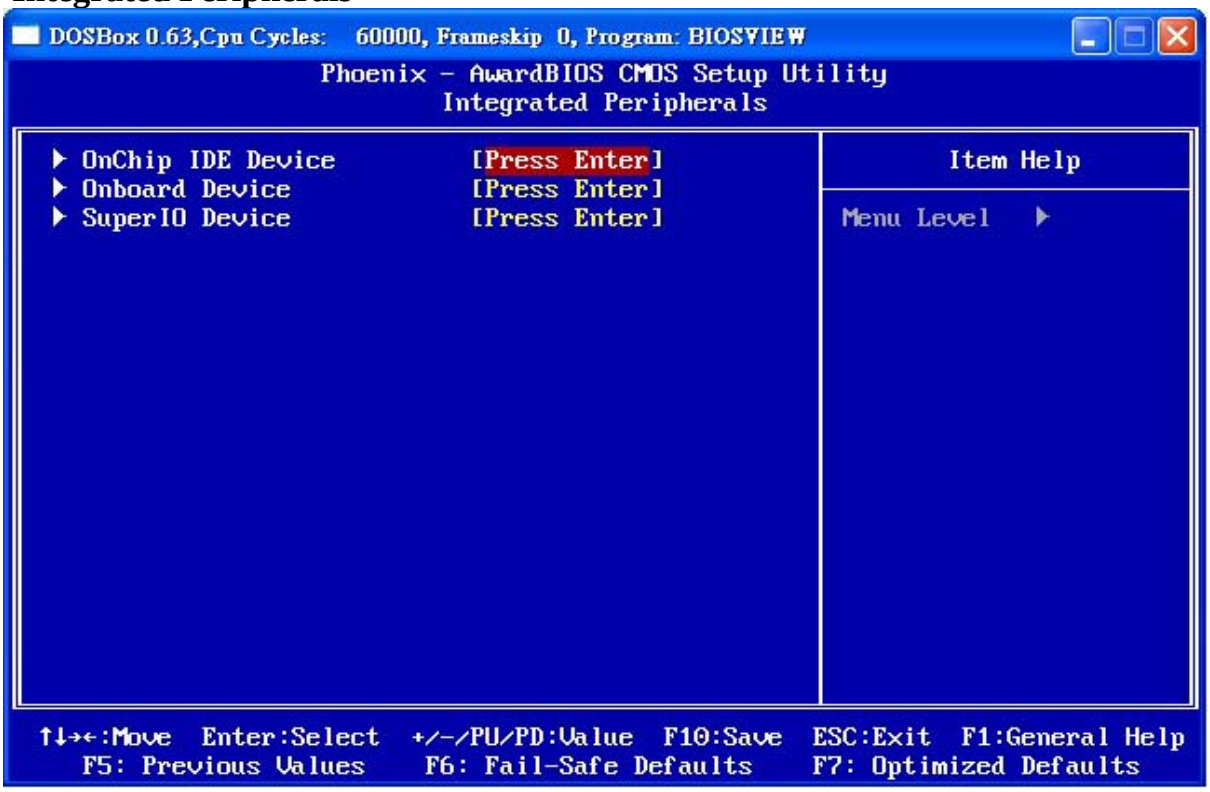
The choices: CRT , LFP(LVDS), CRT+LFP(LVDS).

Panel Number

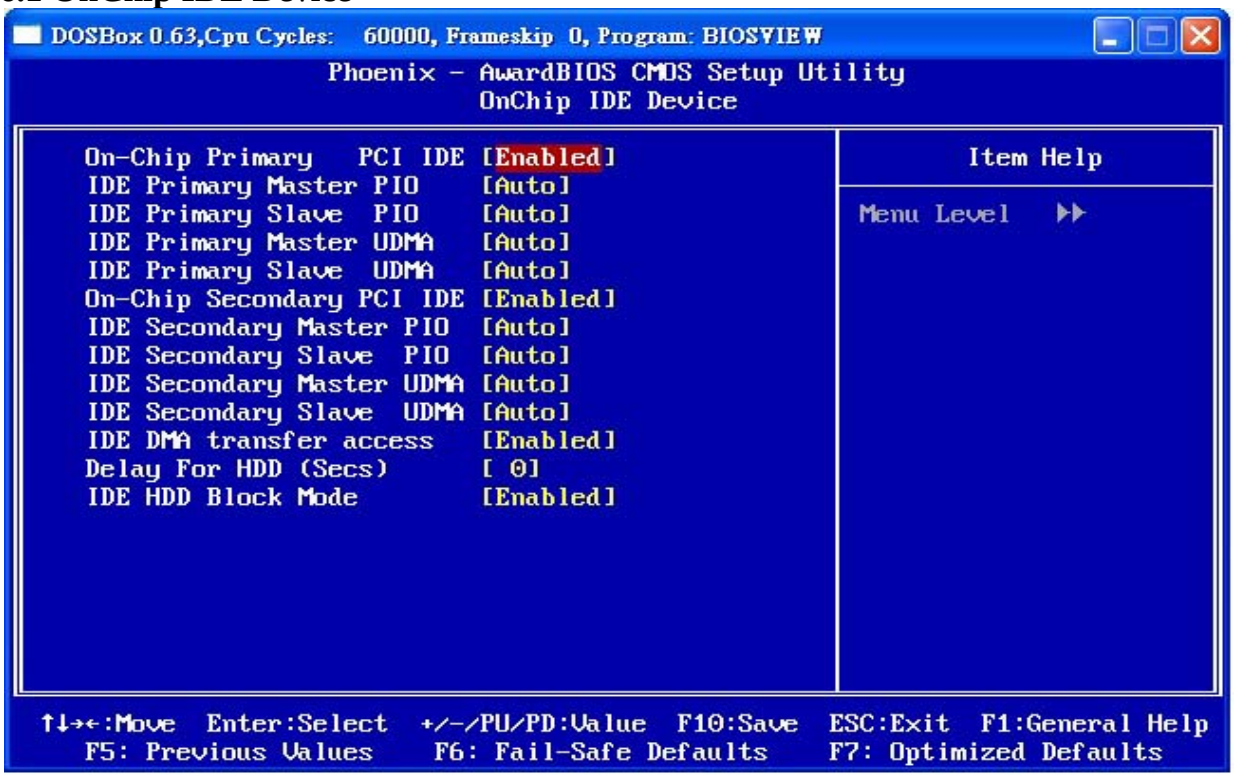
This item is to select the Panel display resolution that will be displayed depending on the LCD panel(LFP)

The choices: 640x480 18 / 800x600 18 / 1024x768 18 / 1280x1024 24x2 / 1400x1050 24 / 1600x1200 24 / 1280x768 24 / 1680x1050 24 / 1920x1200 24 / 1024x768 24 / 1024x76818x2 / 1024x768 24x2 / 1280x800 18 / 1280x600 18 .

4.6 Integrated Peripherals


DOSBox 0.63,Cpu Cycles: 60000, Frameskip 0, Program: BIOSVIEW
Phoenix - AwardBIOS CMOS Setup Utility
Integrated Peripherals
OnChip IDE Device [Press Enter]
Onboard Device [Press Enter]
SuperIO Device [Press Enter]
Item Help
Menu Level
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

4.6.1 OnChip IDE Device


DOSBox 0.63,Cpu Cycles: 60000, Frameskip 0, Program: BIOSVIEW
Phoenix - AwardBIOS CMOS Setup Utility
OnChip IDE Device
On-Chip Primary PCI IDE [Enabled]
IDE Primary Master PIO [Auto]
IDE Primary Slave PIO [Auto]
IDE Primary Master UDMA [Auto]
IDE Primary Slave UDMA [Auto]
On-Chip Secondary PCI IDE [Enabled]
IDE Secondary Master PIO [Auto]
IDE Secondary Slave PIO [Auto]
IDE Secondary Master UDMA [Auto]
IDE Secondary Slave UDMA [Auto]
IDE DMA transfer access [Enabled]
Delay For HDD (Secs) [0]
IDE HDD Block Mode [Enabled]
Item Help
Menu Level
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

On-Chip channel 0/channel 1 PCI IDE

The motherboard chipset contains a PCI IDE interface with support for two IDE channels. These two IDE channels are for IDE1 and SATA1/2/3/4 connectors use. Select "**Enabled**" to activate the first and/or second IDE interface. Select "**Disabled**" to deactivate the interface if you are going to install a primary and/or secondary add-in IDE interface. Options: Enabled (default)、Disabled

IDE channel 0/channel 1 Master/Slave PIO

Set all of these to **Auto** and let the BIOS determine if each drive is capable of Ultra DMA support, and its respective PIO mode.

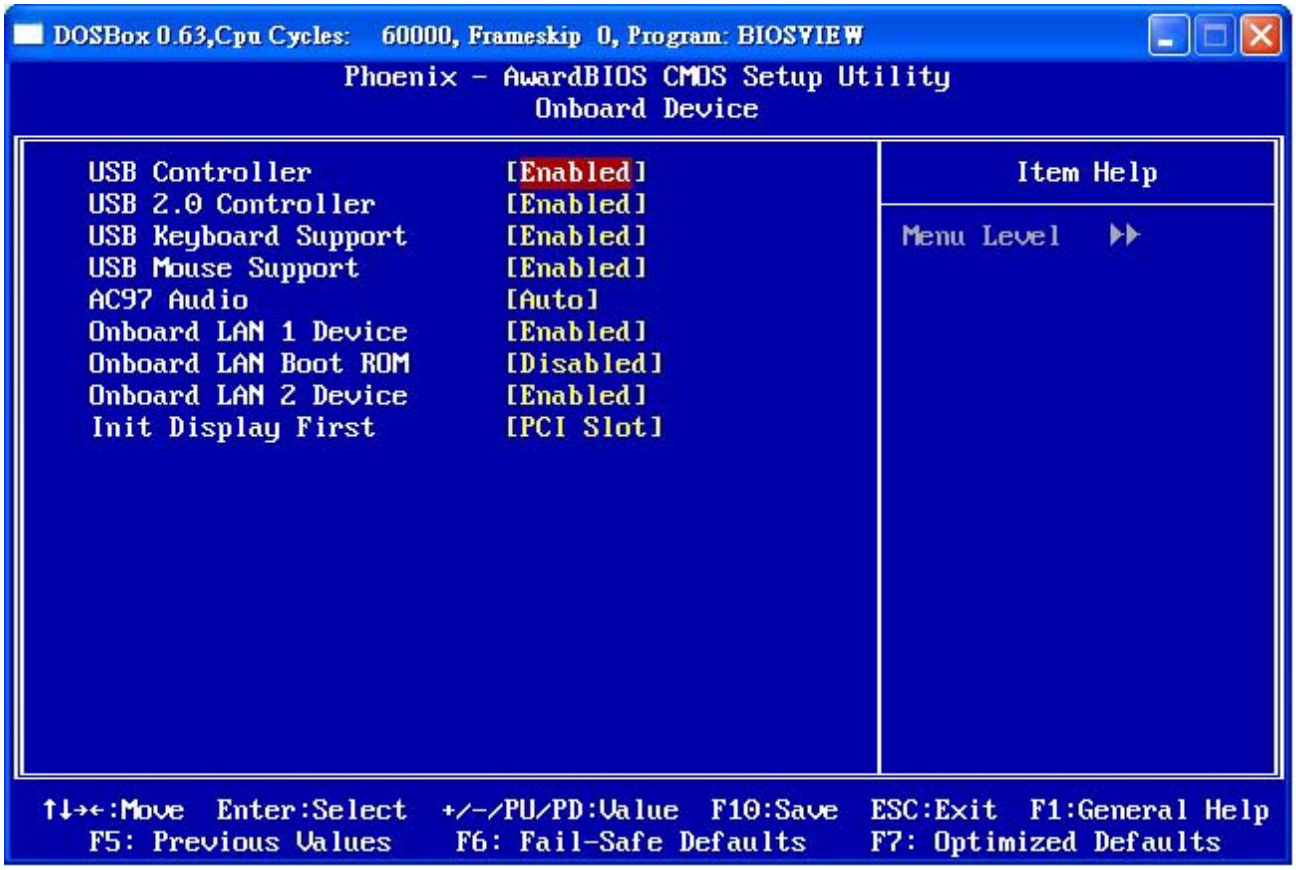
IDE channel 0/channel 1 Master/Slave UDMA

Same as above.

IDE HDD Block Mode

Enabled is recommended for the best hard drive performance. Windows NT 4.0 users should set this to Disabled unless they can confirm they have been updated with a Service Pack that will work with it.

4.6.2 Onboard Device


DOSBox 0.63,Cpu Cycles: 60000, Frameskip 0, Program: BIOSVIEW
Phoenix - AwardBIOS CMOS Setup Utility
Onboard Device
USB Controller [Enabled]
USB 2.0 Controller [Enabled]
USB Keyboard Support [Enabled]
USB Mouse Support [Enabled]
AC97 Audio [Auto]
Onboard LAN 1 Device [Enabled]
Onboard LAN Boot ROM [Disabled]
Onboard LAN 2 Device [Enabled]
Init Display First [PCI Slot]
Item Help
Menu Level ▶▶
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

USB Controller

This option should be **enabled** if your system has a USB port installed on the system board. You will need to disable this feature if you add a higher performance controller. Options: Enabled (default)、Disabled

USB 2.0 Controller

This option should be **enabled** if your system has a USB 2.0 device installed on the system board. You will need to **disable** this feature if you install a USB 1.1 device.Options: Enabled (default)、Disabled

USB Keyboard Support

Enables support for USB attached keyboards. Options: Disabled (default)、Enabled

USB Mouse Support

Enables support for USB attached mouse. Options: Disabled (default)、Enabled

Audio Device

This item allows you to control the onboard audio. Options: Auto (default)、Disabled

Onboard LAN 1 Device

Enables support for USB attached mouse. Options: Disabled (default)、Enabled

Onboard LAN Boot ROM

This item allows you to control the onboard audio. Options: Auto (default)、Disabled

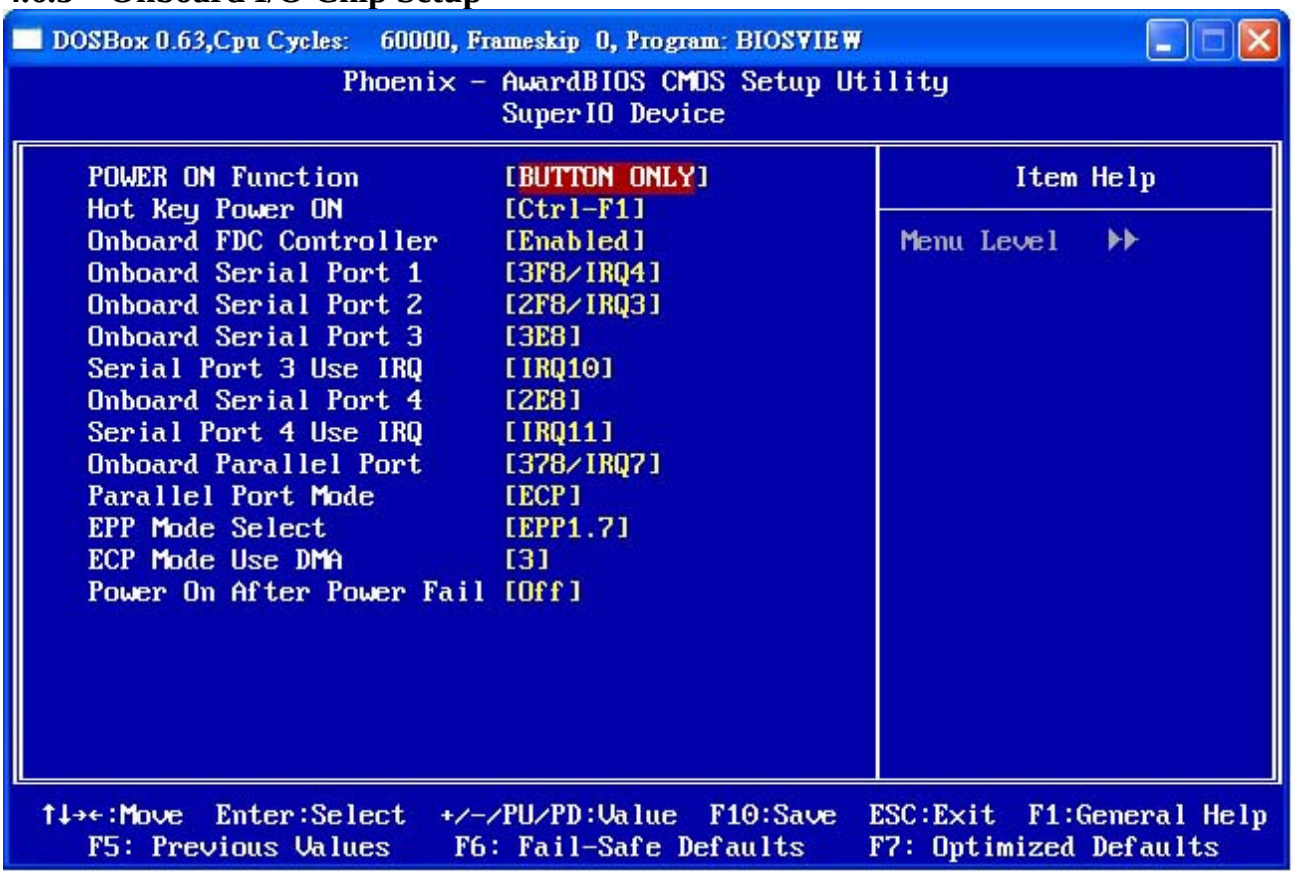
Onboard LAN 1 Device

Enables support for USB attached mouse. Options: Disabled (default)、Enabled

Init Display First

This item allows specifies which VGA card is your primary graphic adapter.

4.6.3 Onboard I/O Chip Setup


DOSBox 0.63,Cpu Cycles: 60000, Frameskip 0, Program: BIOSVIEW
Phoenix - AwardBIOS CMOS Setup Utility
SuperIO Device
POWER ON Function [BUTTON ONLY]
Hot Key Power ON [Ctrl-F1]
Onboard FDC Controller [Enabled]
Onboard Serial Port 1 [3F8/IRQ4]
Onboard Serial Port 2 [2F8/IRQ3]
Onboard Serial Port 3 [3E8]
Serial Port 3 Use IRQ [IRQ10]
Onboard Serial Port 4 [2E8]
Serial Port 4 Use IRQ [IRQ11]
Onboard Parallel Port [378/IRQ7]
Parallel Port Mode [ECP]
EPP Mode Select [EPP1.7]
ECP Mode Use DMA [3]
Power On After Power Fail [Off]
Item Help
Menu Level ▶▶
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Power On Function

This option allows you to select a way to power on your computer. Options: Password、Hot KEY、Mouse Left、Mouse Right、Any KEY、BUTTON ONLY (default), and Keyboard 98

Hot Key Power ON

This option allows you to use the Ctrl key along with a hot key (function key) to power on your system. This field is only configurable when "Power On Function" is set to "Hot Key".Options: Ctrl-F1、Ctrl-F2…… Ctrl-F12

Onboard FDC Controller

Select "**Enabled**" if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If you install an add-in FDC or the system has no floppy drive, select "**Disabled**". Options: Enabled (default)、Disabled

Onboard Serial Port 1

Select an address and corresponding interrupt for the first/ second serial port.Options: Disabled、3F8/IRQ4 (default for port1)、2F8/IRQ3、3E8/IRQ4、2E8/IRQ3、Auto

Onboard Serial Port 2

Select an address and corresponding interrupt for the first/ second serial port.Options: Disabled、3F8/IRQ4 (default for port1)、2F8/IRQ3、3E8/IRQ4、2E8/IRQ3、Auto

Onboard Serial Port 3

Select an address and corresponding interrupt for the first/ second serial port.Options: Disabled、3E8 (default for port1)、2F8、3F8、2E8

Serial Port 3 Use IRQ

Select an address and corresponding interrupt for the first/ second serial port.Options: Disabled、IRQ10 (default for port1)、IRQ11、IRQ3、IRQ4

Onboard Serial Port 4

Select an address and corresponding interrupt for the first/ second serial port.Options: Disabled、2E8 (default for port1)、2F8、3F8、3E8

Serial Port 4 Use IRQ

Select an address and corresponding interrupt for the first/ second serial port.Options: Disabled、IRQ11 (default for port1)、IRQ10、IRQ3、IRQ4

Onboard Parallel Port

Select an address and corresponding interrupt for the onboard parallel port.Options: 378/IRQ7 (default)、278/IRQ5、3BC/IRQ7、Disabled

Parallel Port Mode

This option allows you to select a parallel port mode for the onboard parallel port.

Options:

ECP (default) Extended Capabilities Port.

EPP Enhanced Parallel Port.

SPP Standard Printer Port.

ECP+EPP ECP & EPP mode.

Normal

EPP Mode Select

Select EPP port type 1.7 or 1.9. This field is only configurable if "Parallel Port Mode" is set to "EPP" or "ECP+EPP". Options: EPP 1.9(default)、EPP 1.7

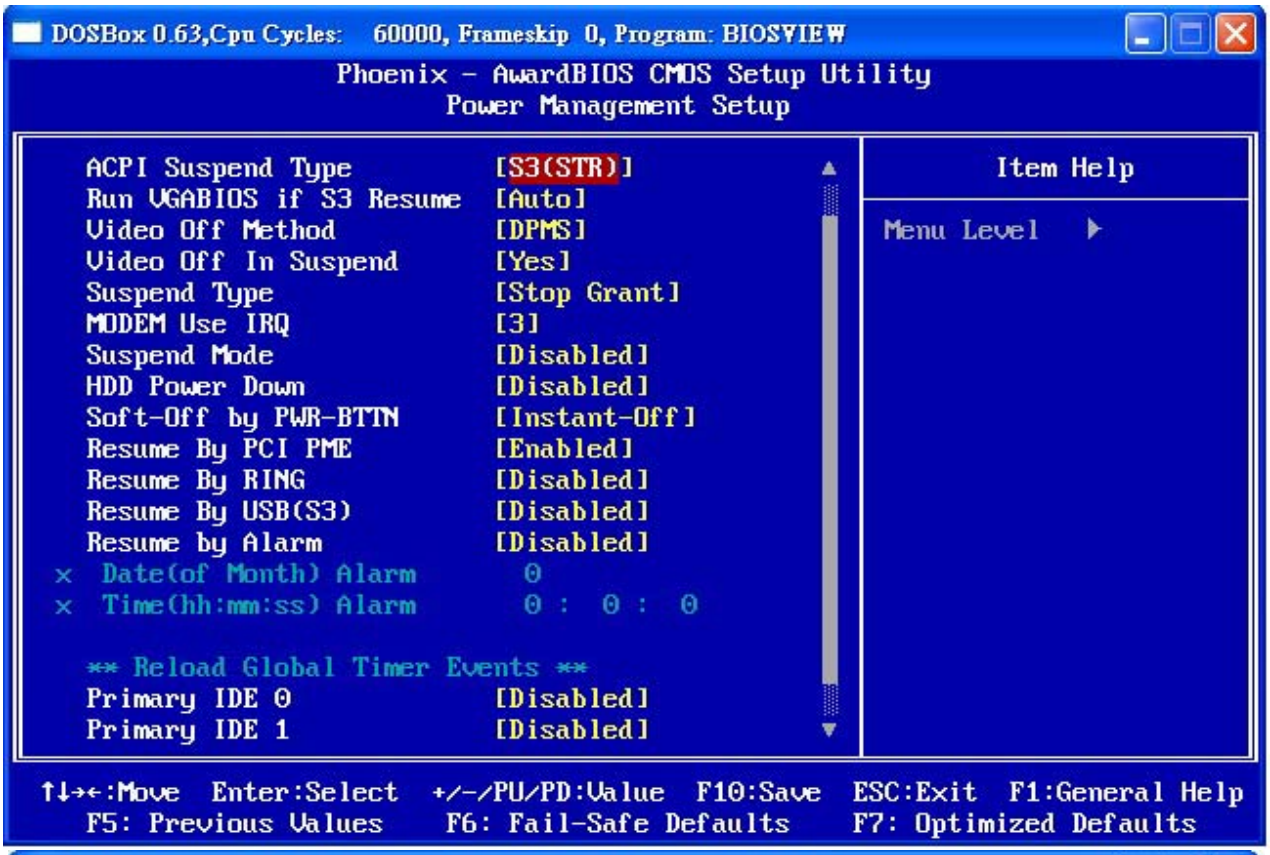
ECP Mode Use DMA

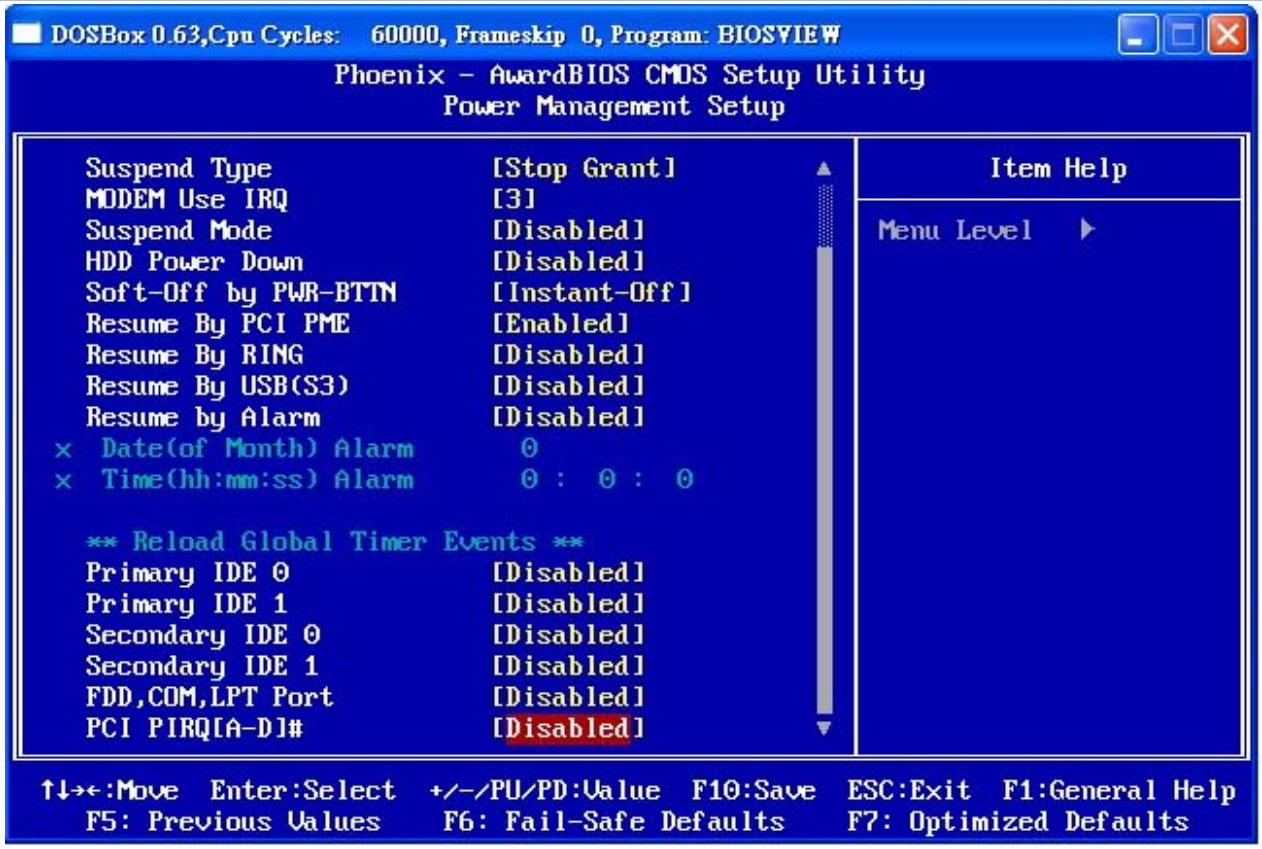
Select a DMA Channel for the parallel port when using the ECP mode. This field is only configurable if "Parallel Port Mode" is set to "ECP". Options: 3 (default)、1

Power On After Power Fail

This item is to set whether to run AC loss Auto Re-star or OFF

4.7 Power Management Setup


DOSBox 0.63,Cpu Cycles: 60000, Frameskip 0, Program: BIOSVIEW
Phoenix - AwardBIOS CMOS Setup Utility
Power Management Setup
ACPI Suspend Type [S3(STR)]
Run VGABIOS if S3 Resume [Auto]
Video Off Method [DPMS]
Video Off In Suspend [Yes]
Suspend Type [Stop Grant]
MODEM Use IRQ [3]
Suspend Mode [Disabled]
HDD Power Down [Disabled]
Soft-Off by PWR-BTTN [Instant-Off]
Resume By PCI PME [Enabled]
Resume By RING [Disabled]
Resume By USB(S3) [Disabled]
Resume by Alarm [Disabled]
x Date(of Month) Alarm 0
x Time(hh:mm:ss) Alarm 0 : 0 : 0
** Reload Global Timer Events **
Primary IDE 0 [Disabled]
Primary IDE 1 [Disabled]
Item Help
Menu Level ▶
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults


DOSBox 0.63,Cpu Cycles: 60000, Frameskip 0, Program: BIOSVIEW
Phoenix - AwardBIOS CMOS Setup Utility
Power Management Setup
Suspend Type [Stop Grant]
MODEM Use IRQ [3]
Suspend Mode [Disabled]
HDD Power Down [Disabled]
Soft-Off by PWR-BTTN [Instant-Off]
Resume By PCI PME [Enabled]
Resume By RING [Disabled]
Resume By USB(S3) [Disabled]
Resume by Alarm [Disabled]
x Date(of Month) Alarm 0
x Time(hh:mm:ss) Alarm 0 : 0 : 0
** Reload Global Timer Events **
Primary IDE 0 [Disabled]
Primary IDE 1 [Disabled]
Secondary IDE 0 [Disabled]
Secondary IDE 1 [Disabled]
FDD,COM,LPT Port [Disabled]
PCI PIRQ[A-D]# [Disabled]
Item Help
Menu Level ▶
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

ACPI Suspend Mode

This item specifies the power saving modes for ACPI function. Available options are:

1. S1 (POS)

The S1 state is low power state. In this state, no system context (CPU or Chipset) is lost and the hardware maintains all system contexts.

2. S3 (STR)

The S3 state is a lower power state, where the information of system configuration and opened applications / files are saved to main memory. The remaining power of other hardware components are turn off to save energy.

The information stored in memory will be used to restore the system when a wake up event occurs.

3. S1 & S3

If S3 state is supported by the system, by default [S3] is automatically selected. Otherwise [S1] is selected.

Run VGABIOS if S3 Resume

Select whether you want to run VGABIOS when the system wakes up from the S3 suspend function. This field is not configurable if "ACPI Suspend Type" is set to "S1(POS)". Options: Auto (default)、Yes、No

Video Off Method

Blank Screen: The system BIOS will only blank off the screen when disabling video.

V/H SYNC + Blank: In addition to Blank screen, BIOS will also turn off the V-SYNC & H-SYNC signals from VGA cards to monitor.

DPMS: Select this option if your monitor supports the Display Power Management Signaling (DPMS) standard of the Video Electronics Standards Association (VESA). Use the software supplied for your video subsystem to select video power management values.
Note: Green monitors detect the V/H SYNC signals to turn off it's electron gun.

Video Off In Suspend

This determines whether power to the monitor is switched off when the computer is in suspend mode. Options: Yes、No (default)

Suspend Type

This item allows you to select the suspend type under the ACPI operating system.Options: Stop Grant (default)、PwrOn Suspend

Modem Use IRQ

This determines the modem's IRQ. Options: 3 (default)、4、5、7、9、10、11、NA.

Suspend Mode

This item allows you to select the suspend time under the ACPI operating system.Options: Disabled(default)、1Min、2Min、4Min、8Min、12Min、20Min、30Min、40Min、1Hour

HDD Power Down

It shuts down any IDE hard disk drives in the system after an idle period. This feature does not affect SCSI hard drives. **Disabled** is recommended.

Soft-Off by PWRBTN

When set to **Delay 4 Sec**., this function allows the power button to put the system in Suspend, a power saving mode. When set to **Instant-Off**, the Soft-Off by PWR-BTN function is disabled and the computer turns completely off when the power button is pressed.

Resume by Alarm

When "**Enabled**", you can set the date and time at which the RTC (real-time clock) alarm awakens the system from Suspend mode. Options: Enabled、Disabled (default).

Date (of Month) Alarm

You can choose which date of the month the system will boot up. This field is only configurable when "RTC Wake Up" is set to "**Enabled**".

Time (hh:mm:ss) Alarm

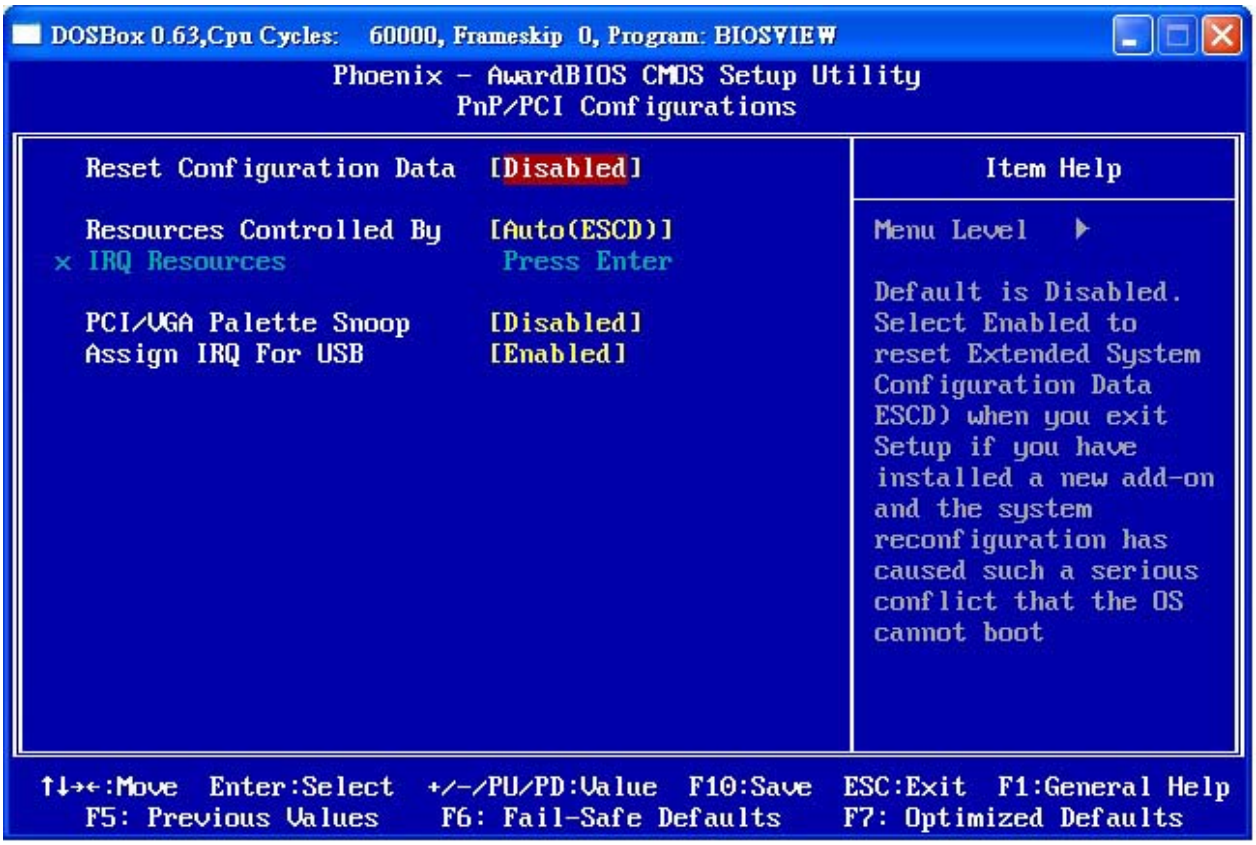
You can choose the hour, minute and second the system will boot up. This field is only configurable when "RTC Wake Up" is set to "**Enabled**".

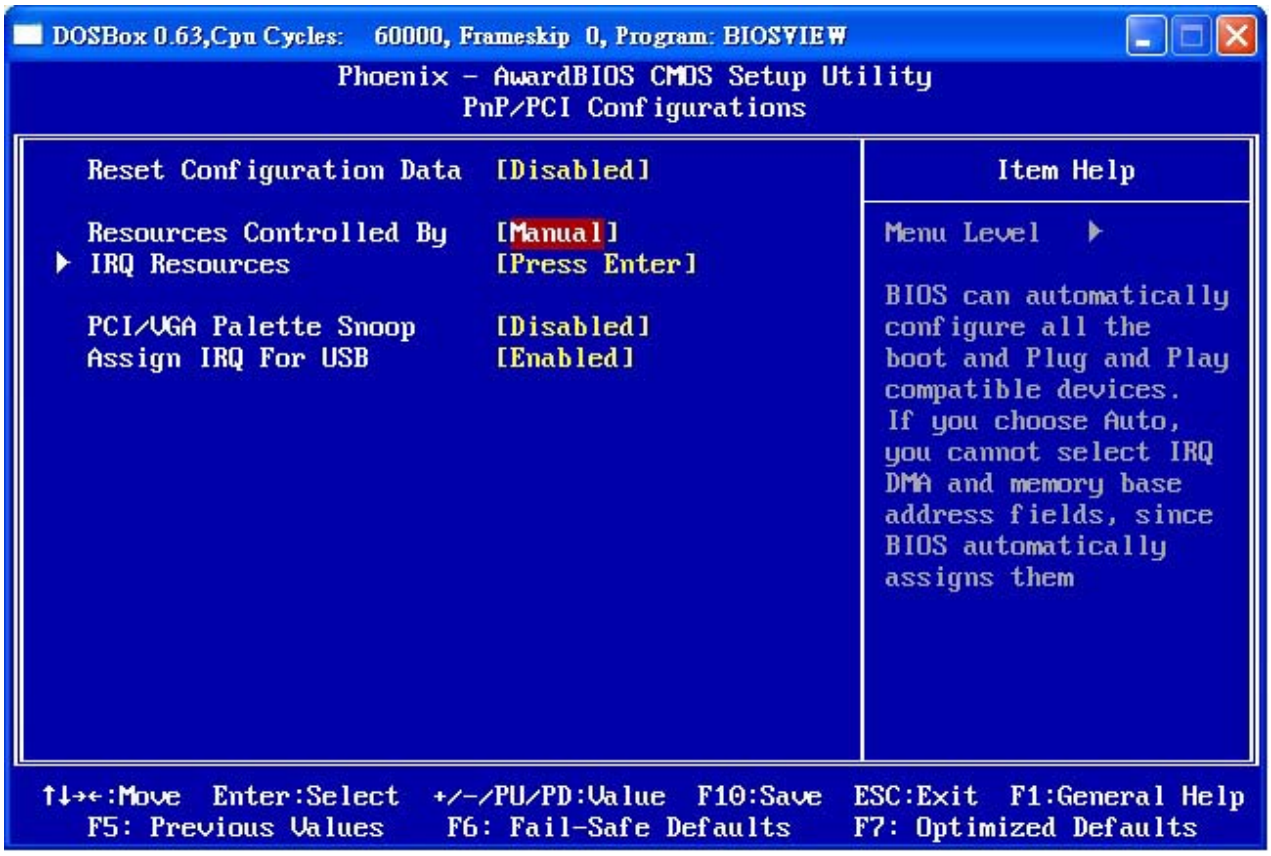
Reload Global Timer Events

When a system goes into suspend mode, certain devices must be inactive for a period of time. Conversely, if any of those devices have any activity, the system will awaken. You can select the devices that will participate in suspend/power-on activity by configuring these fields. Devices include: Primary IDE 0/ Primary IDE 1/ Secondary IDE 0/ Secondary IDE 1/ FDD, COM, LPT Port/ PCI PIRQ [A-D] #.

Options: Disabled (default), Enabled

PnP/PCI Configurations


DOSBox 0.63,Cpu Cycles: 60000, Frameskip 0, Program: BIOSVIEW
Phoenix - AwardBIOS CMOS Setup Utility
PnP/PCI Configurations
Reset Configuration Data [Disabled]
Resources Controlled By [Auto(ESCD)]
x IRQ Resources Press Enter
PCI/VGA Palette Snoop [Disabled]
Assign IRQ For USB [Enabled]
Item Help
Menu Level ▶
Default is Disabled. Select Enabled to reset Extended System Configuration Data ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the OS cannot boot
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults


DOSBox 0.63,Cpu Cycles: 60000, Frameskip 0, Program: BIOSVIEW
Phoenix - AwardBIOS CMOS Setup Utility
PnP/PCI Configurations
Reset Configuration Data [Disabled]
Resources Controlled By [Manual]
IRQ Resources [Press Enter]
PCI/VGA Palette Snoop [Disabled]
Assign IRQ For USB [Enabled]
Item Help
Menu Level
BIOS can automatically configure all the boot and Plug and Play compatible devices. If you choose Auto, you cannot select IRQ DMA and memory base address fields, since BIOS automatically assigns them
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

Reset Configuration Data

If you just install a new hardware or modify your computer's hardware configuration, the BIOS will automatically detect the changes and reconfigure the ESCD(Extended System Configuration Data). Therefore, there is usually no need to manually force the BIOS to reconfigure the ESCD. However, the occasion may arise where the BIOS may not be able to detect the hardware changes. A serious resource conflict may occur and the operating system may not even boot as a result. This is where the Reset Configuration Data BIOS feature comes in. This BIOS feature allows you to manually force the BIOS to clear the previously saved ESCD data and reconfigure the settings. All you need to do is enable this BIOS feature and then reboot your computer. The new ESCD should resolve the conflict and allow the operating system to load normally. Please note that the BIOS will automatically reset it to the default setting of Disabled after reconfiguring the new ESCD. So, there is no need for you to manually disable this feature after rebooting.

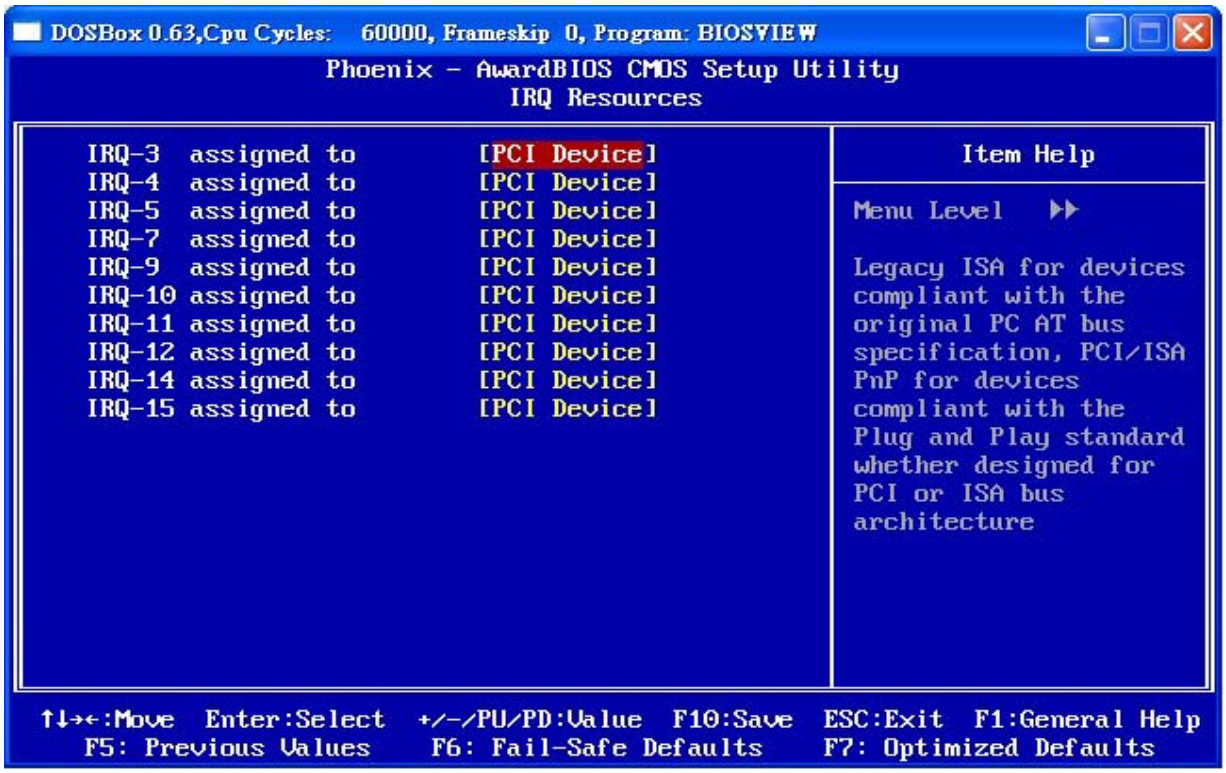
Resources Controlled By

This BIOS feature determines if the BIOS should automatically configure IRQ and DMA resources. The BIOS is generally capable of automatically configuring IRQ and DMA resources for the devices in your computer. Therefore, it is advisable that you set this feature to **Auto**. However, if the BIOS has problems assigning the resources properly, you can select the **Manual** option to reveal the IRQ and DMA assignment fields. You can then assign each IRQ or DMA channel to either **Legacy ISA** or **PCI/ISA PnP** devices. **Legacy ISA** devices are compliant with the original PC AT bus specification and require a specific interrupt and/or DMA channel to function properly. **PCI/ISA PnP** devices, on the other hand, adhere to the Plug and Play standard and can use any interrupt or DMA channel.

4.8.1 IRQ Resources

When resources are controlled manually, you can assign each system interrupt a type, depending on the type of device using the interrupt. This is only configurable when "**Resources Controlled By**" is set to "**Manual**".

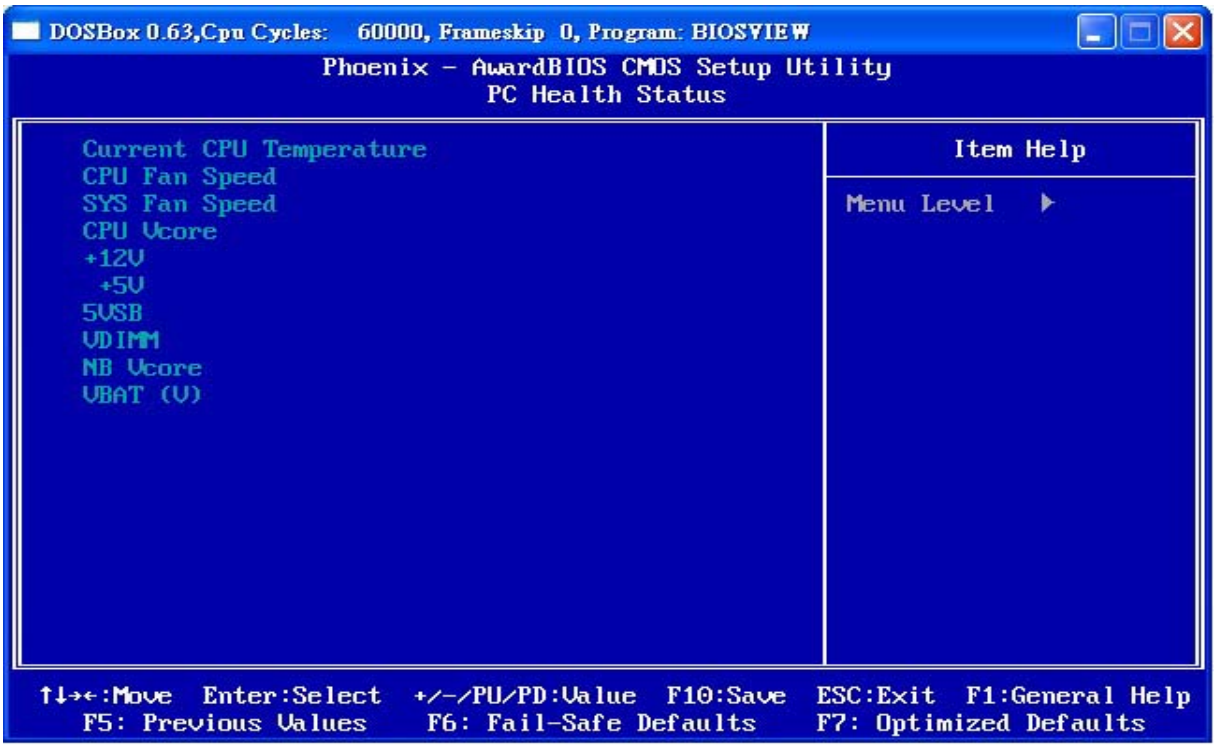
Options: IRQ-3/ 4/ 5/ 7/ 9/ 10/ 11/ 12/ 14/ 15 assigned to PCI device


DOSBox 0.63,Cpu Cycles: 60000, Frameskip 0, Program: BIOSVIEW
Phoenix - AwardBIOS CMOS Setup Utility
IRQ Resources
IRQ-3 assigned to [PCI Device]
IRQ-4 assigned to [PCI Device]
IRQ-5 assigned to [PCI Device]
IRQ-7 assigned to [PCI Device]
IRQ-9 assigned to [PCI Device]
IRQ-10 assigned to [PCI Device]
IRQ-11 assigned to [PCI Device]
IRQ-12 assigned to [PCI Device]
IRQ-14 assigned to [PCI Device]
IRQ-15 assigned to [PCI Device]
Item Help
Menu Level ▶▶
Legacy ISA for devices compliant with the original PC AT bus specification, PCI/ISA PnP for devices compliant with the Plug and Play standard whether designed for PCI or ISA bus architecture
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

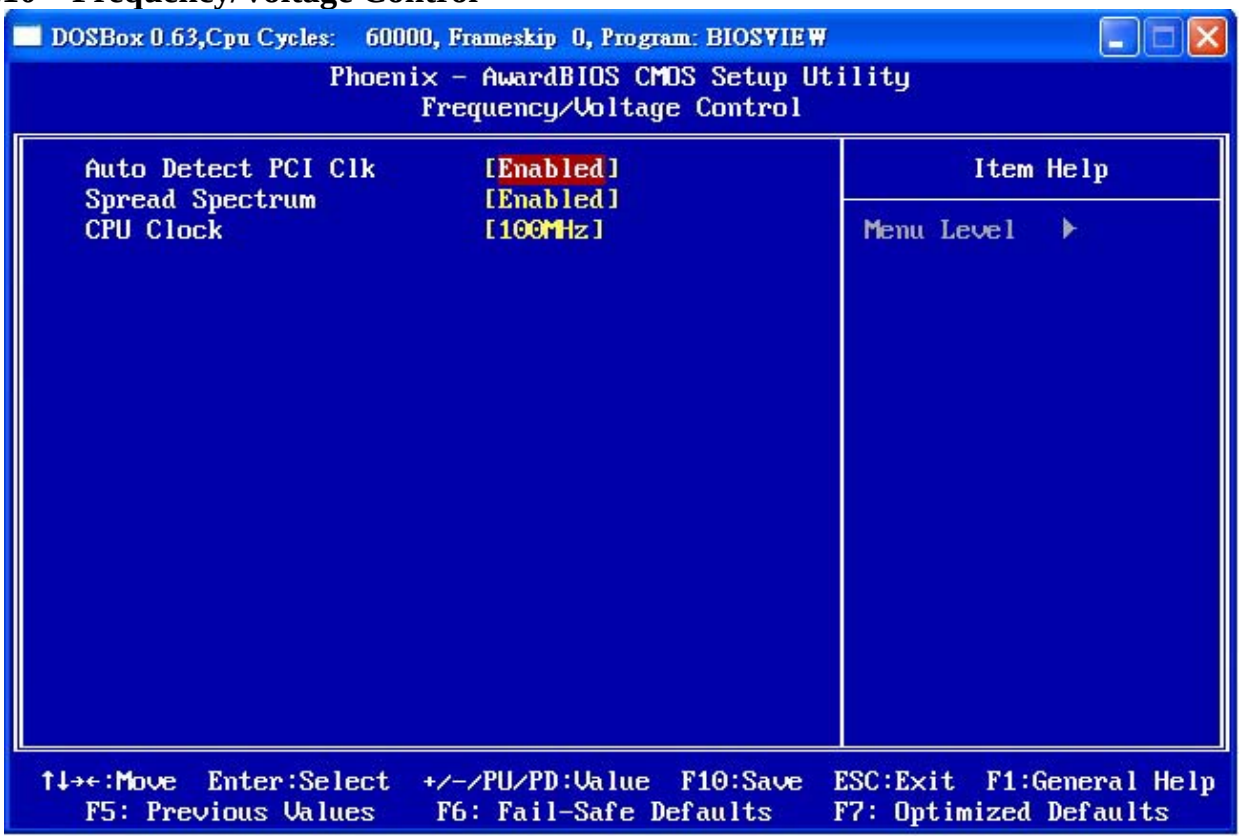
PCI / VGA Palette Snoop

This option is only useful if you use an MPEG card or an add-on card that makes use of the graphics card's Feature Connector. It corrects incorrect color reproduction by "snooping" into the graphics card's framebuffer memory and modifying (synchronizing) the information delivered from the graphics card's Feature Connector to the MPEG or add-on card. It will also solve the problem of display inversion to a black screen after using the MPEG card.

4.9 PC Health Status



4.10 Frequency/Voltage Control


DOSBox 0.63,Cpu Cycles: 60000, Frameskip 0, Program: BIOSVIEW
Phoenix - AwardBIOS CMOS Setup Utility
Frequency/Voltage Control
Auto Detect PCI Clk [Enabled]
Spread Spectrum [Enabled]
CPU Clock [100MHz]
Item Help
Menu Level
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

This item allows you to adjust your CPU core voltage. Options: 0.85~1.9. The default depends on your CPU.

Auto Detect PCI Clk

This item is setting the PCI Clock be automation detect . Option Enable(default) , Disable.

Spread Spectrum

The spikes generated by your motherboards clock generator create EMI (Electromagnetic Interference). This function reduces the EMI by modulating the pulses so that the spikes of the pulses are reduced and hence gives reduced EMI. But this reduction can mean that some of your time-critical devices such as SCSI devices can be affected and their stability reduced. **Leave the setting disabled** especially if you are overclocking your system. If you find you have to try this use the smallest % setting possible.

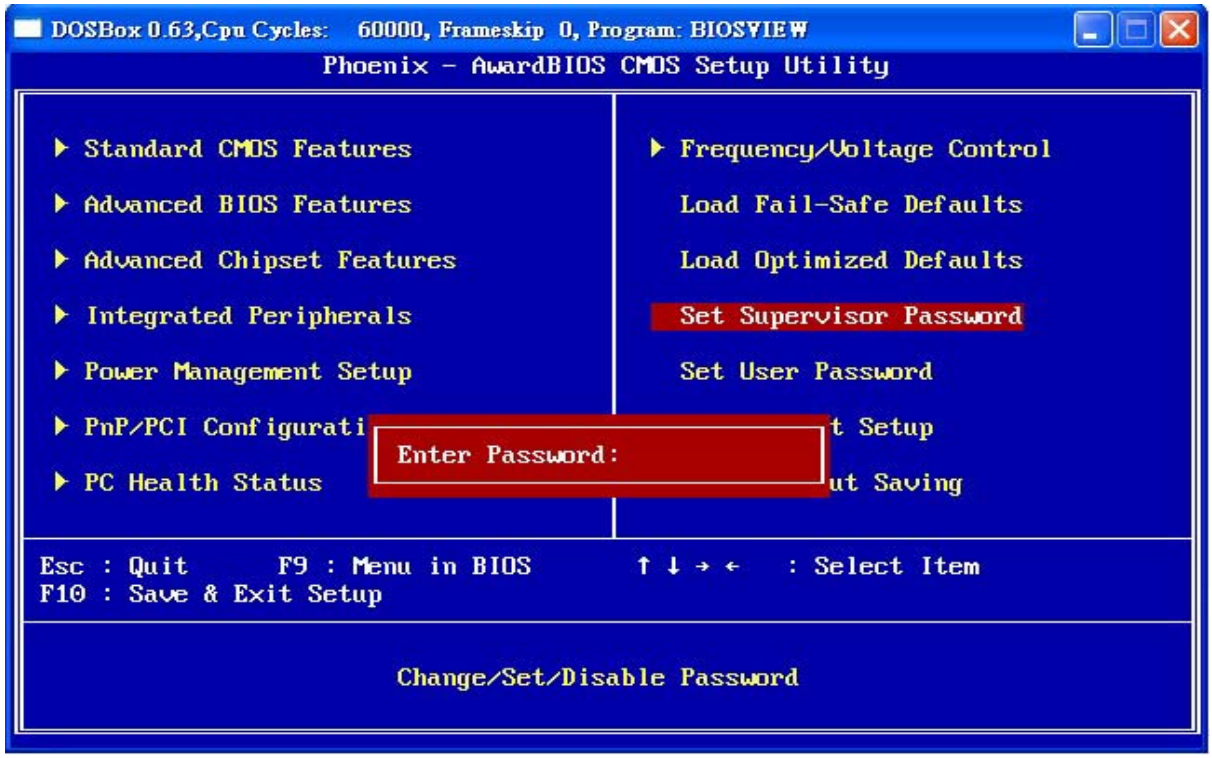
Some BIOS's have a Smart Clock setting which can turn off AGP, PCI & SDRAM clock signals when not in use which reduces EMI without giving system stability problems. This also gives a slight reduction in power consumption.

CPU Clock Ratio

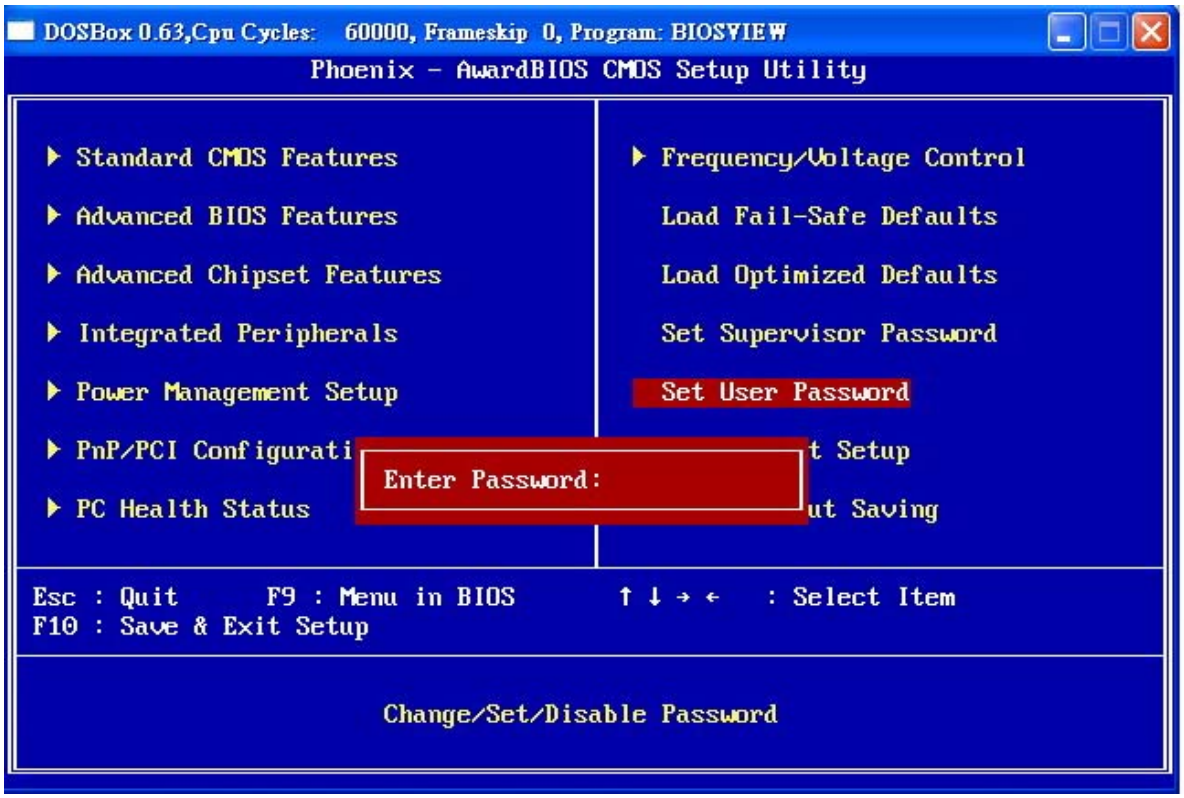
This field will only display if the CPU has not been set to a locked state by the CPU manufactory. If your CPU is locked, you will not be able to adjust the "CPU Clock Ratio". The default depends on your CPU.

4.11 Set Supervisor Password

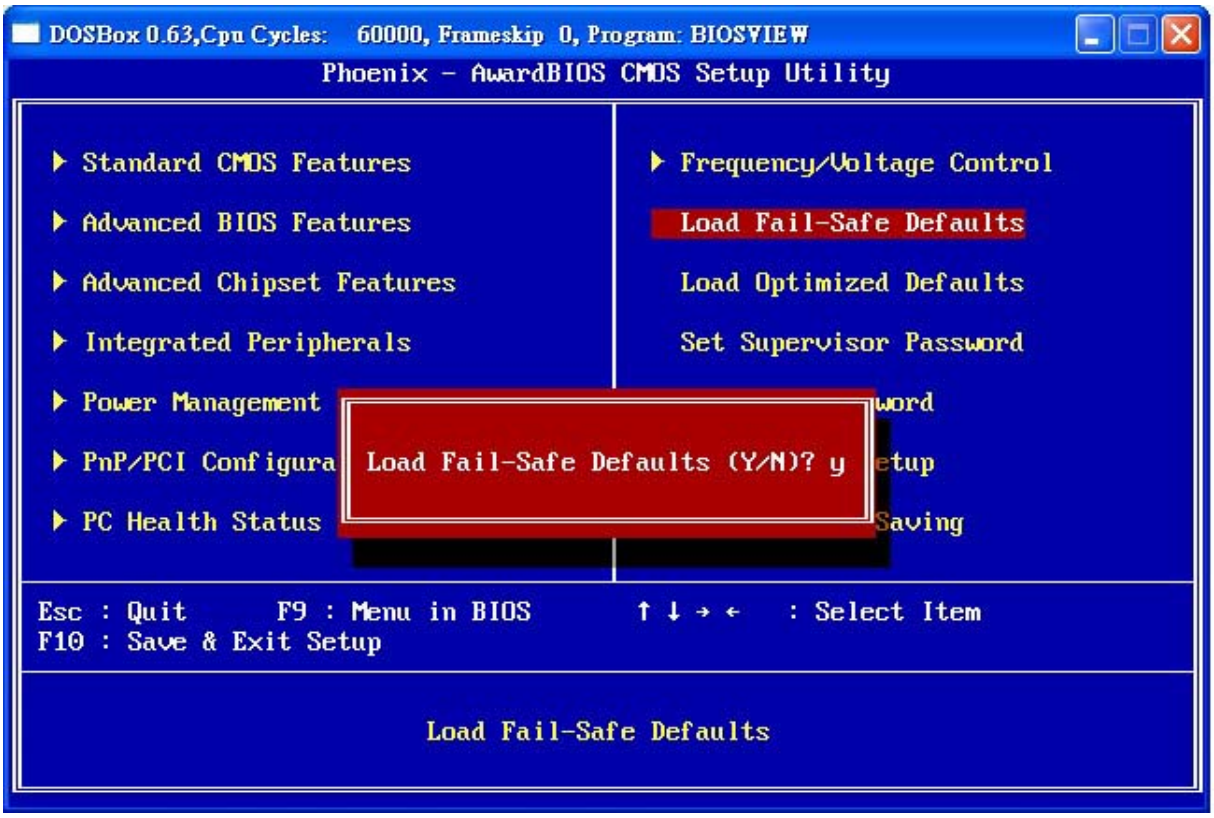
This feature consists of two options -- **Set Password** as well as **Security Option**. If you set a password for security, the Security Option will enable you to determine whether the code needs to be entered during the boot process or when you enter the BIOS settings.



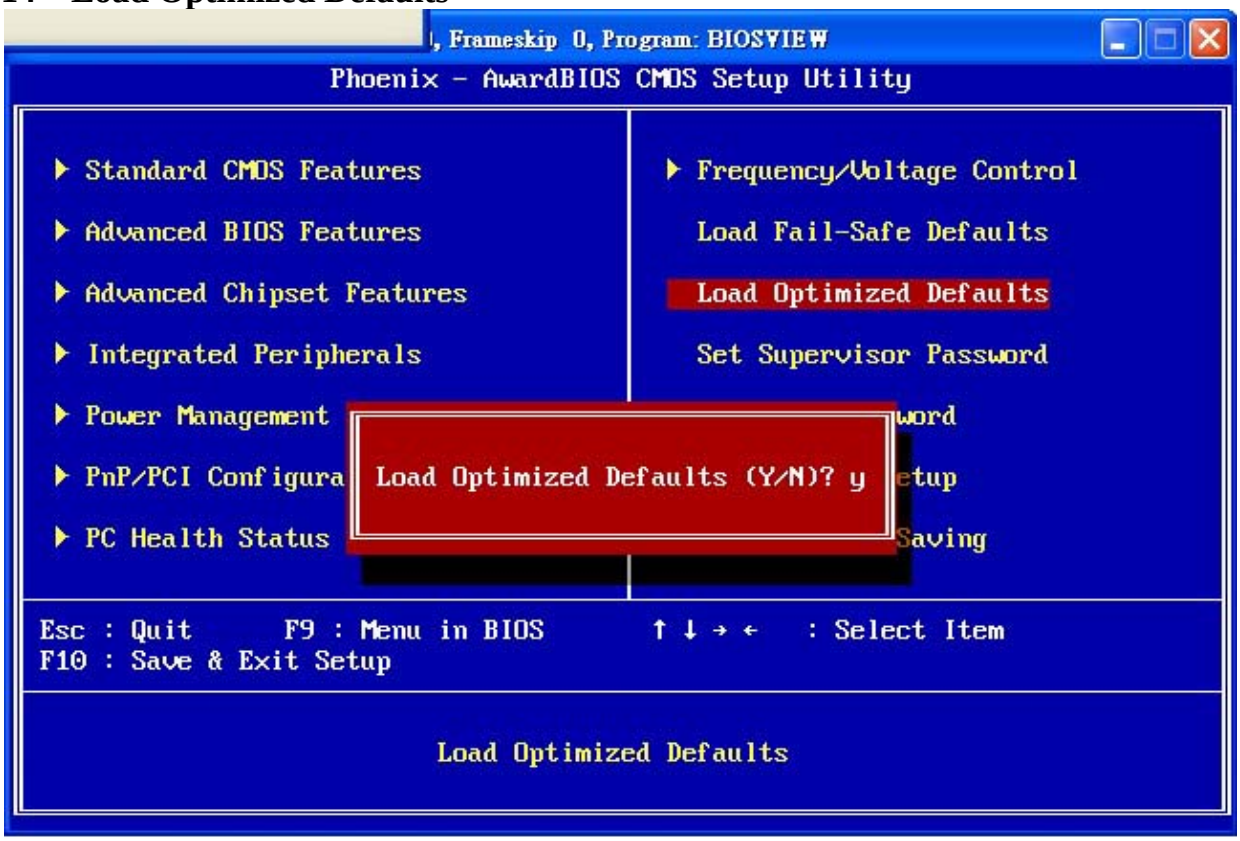
4.12 Set User Password



4.13 Load Fail-Safe Defaults


DOSBox 0.63,Cpu Cycles: 60000, Frameskip 0, Program: BIOSVIEW
Phoenix - AwardBIOS CMOS Setup Utility
Standard CMOS Features
Advanced BIOS Features
Advanced Chipset Features
Integrated Peripherals
Power Management
PnP/PCI Configura
PC Health Status
Frequency/Voltage Control
Load Fail-Safe Defaults
Load Optimized Defaults
Set Supervisor Password
Load Fail-Safe Defaults (Y/N)? y
Esc : Quit F9 : Menu in BIOS ↑ ↓ → ← : Select Item
F10 : Save & Exit Setup
Load Fail-Safe Defaults

4.14 Load Optimized Defaults


Frameskip 0, Program: BIOSVIEW
Phoenix - AwardBIOS CMOS Setup Utility
Standard CMOS Features
Advanced BIOS Features
Advanced Chipset Features
Integrated Peripherals
Power Management
PnP/PCI Configura
PC Health Status
Frequency/Voltage Control
Load Fail-Safe Defaults
Load Optimized Defaults
Set Supervisor Password
Load Optimized Defaults (Y/N)? y
Esc : Quit F9 : Menu in BIOS ↑ ↓ → ← : Select Item
F10 : Save & Exit Setup
Load Optimized Defaults

Load System Default Settings

To avoid errors, this option allows you to recover the original defaults of BIOS. In fact, this is the first skill you should know as you try to set other defaults of BIOS.

Load System Turbo Settings

This option has the similar function to the previous one. The difference between them is that this is more efficient in settings, and this has the disadvantage of potentially making the system unstable. So, the decision is up to you.

Load CMOS From BIOS

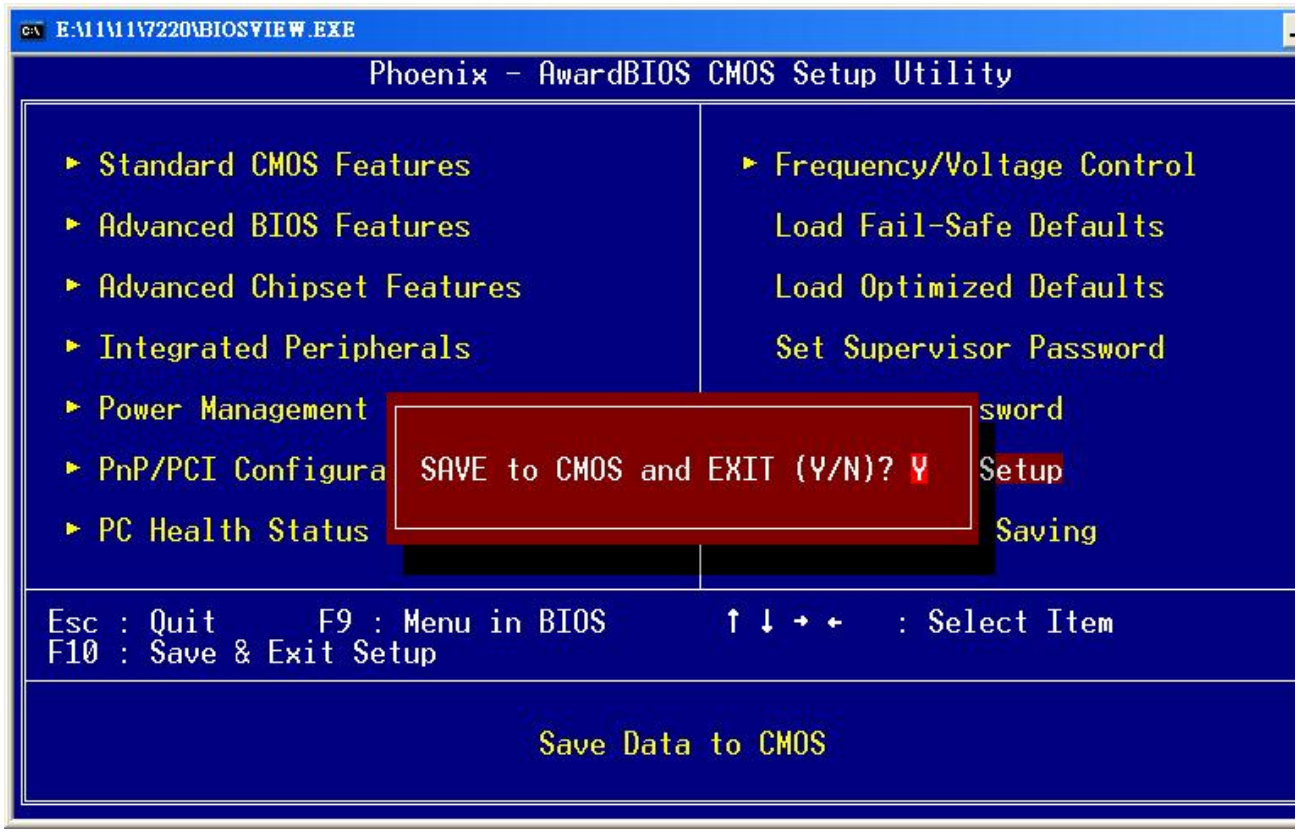
Load defaults from flash ROM for systems without batteries.

Save CMOS To BIOS

Save defaults to flash ROM for systems without batteries.SAVE to COMS and Exit

4.15 Save & Exit Setup

If you select this and type **Y** followed by **Enter**, the values entered in the setup utilities will be recorded in the CMOS memory of the BIOS chip.



Exit Without Saving

Same as above, but without saving.